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AMIGA COMPUTING

Personal Paint 4
Worth £50!
Fully featured, award-winning paint package

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AMIGA COMPUTING
Requires at least WB1.3, 1Mb Ram
Personal Paint 4
A full version of Cloanto's superb paint and image processing package exclusive to Amiga Computing



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Requires at least WB2.04, 1Mb Ram
Utility heaven 2
The latest and best PD & shareware titles just for you. This month's titles include:
MUI applications: ReKeyIt, ForceIcon and an Aquarium simulator!
Shareware titles: NewEdit, PowerSnap, Move and many more



Cheaper faster better



The Amiga finally goes back into production – new models revealed

IDG MEDIA

PLUS
- ImageFX 2.1
- Photogenics 1.2
- Electronic publishing
- CyberCafé
- MUI special
- PowerStation
- Telecom pricing
- Fiber Factory
- AmiTCP
- DTP dilemmas

QUALITY AMIGA PERIPHERALS & SOFTWARE

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FOR ALL AMIGA COMPUTERS



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£99 INC VAT VID 2100

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OVERDRIVE QUAD SPEED CD-ROM
FOR THE AMIGA 1200

This unit combines a CD-ROM drive with the future in Smart Card Interfaces, the PCMCIA slot. This makes for an incredibly convenient and simple to use CD-ROM drive system opening up a whole new world of CD/multimedia technology.



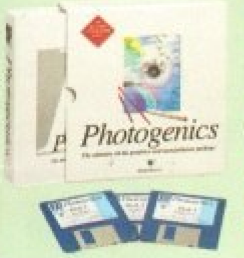
- PCMCIA connection
- Quad speed mechanism
- 600K/sec data transfer rate
- PhotoCD compatible
- Multi-session compatible
- Runs most CD[32] software

NEW

£249 INC VAT HAR 3542

SEE PAGE 2 FOR FULL OVERDRIVE RANGE

IMAGE MANIPULATION
PHOTOGENICS V1.2
FOR A1200/A4000

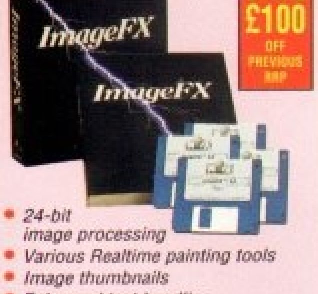


- Manipulate and paint graphics in 24-bit
- Supports popular image formats including JPEG, GIF, IFF and PhotoCD
- Multiple image editing
- Real-time HAM8 display
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IMAGE FX v2.0
FOR ALL AMIGAS



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SCSI INTERFACE

SCSI-2 INTERFACE
SQUIRREL
FOR A600/A1200



Named after the famous storage hungry animal, the Squirrel SCSI-2 interface simply plugs into the PCMCIA slot (avoiding warranty problems) and allows you to connect up to 7 SCSI devices to your Amiga at the same time. This could be any combination of hard drives, SCSI CD-ROM drives, tape streamers, SyQuest removable drives, etc.

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FOR ALL AMIGAS



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MICE & J'STICKS

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FOR ALL AMIGAS



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Allows access to Amiga specific CDs and play CD³² software - HAR 3540

OverDrive Quad Speed £249.00
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SEE FEATURE ON PAGE 1

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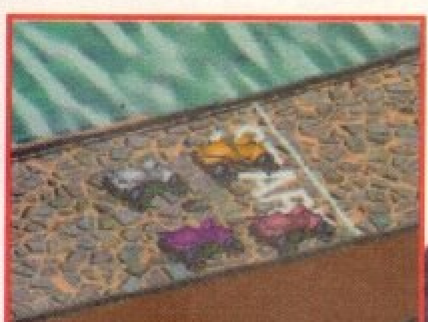
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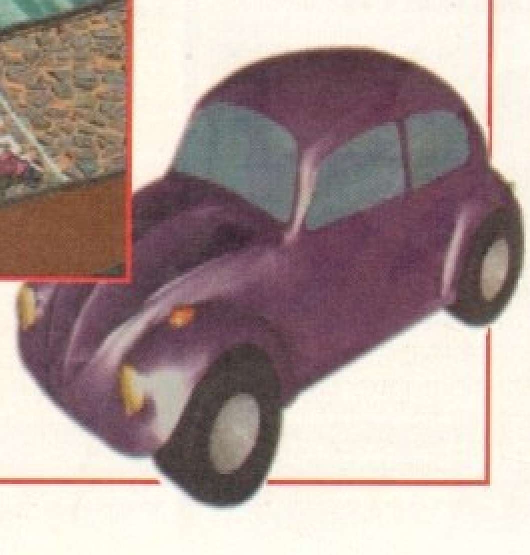
SYSTEM

The essential guide to Amiga gaming

Game Reviews



Will Wheelspin end up in the pole position for race-'em-ups?



Reviews



The latest revision of Nova's superb image processor gets a good going over



Features



Next issue on sale 27 July

COVER STORY



Cheaper faster better

Escom announce their plans, and there are a few surprises in store. Find out all the news as Paul Austin leads us into the future of the Amiga

See page 22

THE COVERDISKS

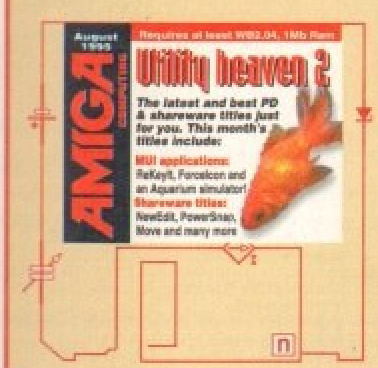
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Personal Paint v4

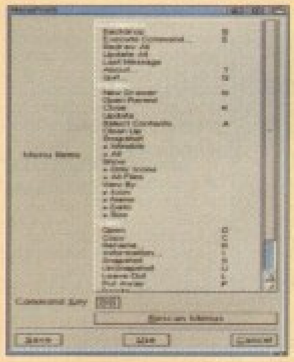
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AMIGA GUIDE





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NEWS

By Gareth Lofthouse

Amiga saved, but Pleasance goes

On 30 May, MD Manfred Schmidt presented Escom's plans for the future of the Amiga at a press conference in Frankfurt. Assembled members of the press and trade industry were told that a new company called Amiga Technologies has been established to lead the Amiga forward. It is to be headed by Petro Tyschtschenko, former Director of Logistics for Commodore International.

To the disappointment of the Amiga industry in Britain, however, Escom have not included David Pleasance, MD of Commodore UK, into their future plans. Joint MD, Colin Proudfoot, has also been dropped.

Pleasance and Proudfoot had hoped to negotiate a future for the UK subsidiary with Escom after the German company acquired the remains of Commodore at the auction in New York last month. Previously, Pleasance's team had looked like favourites to win the bidding process, but on the day in question they could not match the financial muscle of rivals Escom and Dell.

Despite meeting twice with Pleasance and Proudfoot, however, Escom's management decided not to take over Commodore UK in its current form. "This was actually a global policy of Escom regarding the Amiga," explained Gilles Bourdin, the newly appointed PR Manager for Amiga Technologies. "We decided just to take the trademark, the logos and a few people we wanted to work with, but without taking over the structure of the former Commodore. This is exactly the same as what happened with Commodore in Germany."

The news of Pleasance's departure will come as a blow to the majority of developers and distributors in Britain who saw him as the best man for the job. Neither Pleasance or Proudfoot were available for comment at the time *Amiga Computing* went to press.

Though it appears that Commodore UK's Maidenhead offices are being abandoned by Escom, the Stanstead unit will be retained. It will be managed by Jonathon Anderson, previously head of sales for C=UK, as a research and development centre. Five other members of the Commodore UK team have also been taken on board by Amiga Technologies.



No room found by Escom for Pleasance or Proudfoot

New developments planned

Optimism for the future of the Amiga was at its highest level in years following the revelation of Escom's plans for technological developments on the platform. The Amiga Technology development division is already working on the next generation of RISC-based computers and a set-top unit that will exploit the Amiga's multimedia strengths.

Closer to hand is the promise of new machines for early 1996, including an 030 version of the A1200 and an 060 version of the A4000. In the meantime, supplies of the current Amiga range will start rolling out with the A4000 Tower unit coming first followed by the A1200 which should reappear in October.

QUICK RETURN

According to Petro Tyschtschenko, General Manager of the Amiga Technologies company, Escom expects to make back the $10 million it spent on the buy out in as short a period as Spring 1996 through sales and licenses. In 1995 alone, a turnover of 100 million DM has been predicted – mainly from the sales of A1200, A4000 and CD32 units.

Whether these estimations will come to fruition will be seen in the fullness of time, but the announcement that the presentation package Scala MM300 will be bundled with newly sold Amigas can only help to make the Amiga's retail position stronger.

For the full in-depth report on Escom's plans for the future, read the cover feature inside this month's issue.

ZCL brought down by Amiga's absence

News of the Amiga's salvation came too late for the huge distribution and retail empire, ZCL. Following the decision of the firm's founder, Don Carter, to call in the receivers on 30 May, the UK computer industry has been rocked by the surprise collapse of one of the biggest national forces in the computer trade.

Carter blamed the company's difficulties on the fall of Commodore International. ZCL had been one of the biggest distributors of the Amiga and its related products, and the sudden absence of the popular home computer caused the company to experience huge losses.

The launch of the successful Calibre PC range was an attempt to compensate for lost business, but ultimately these sales were insufficient to save the company. ZCL employed a workforce of 137 people and incorporated the Taurus wholesale operation, the Calculus retail chain, and the Indi Direct mail order firm. The business reportedly has substantial assets and a balance sheet surplus, so it is hoped that buyers will soon be found for the three divisions which will continue to trade in the meantime.

BBFC to raise charges

Publishers of software containing violence or adult content could be faced with vastly increased production costs following a call for a rise in classification charges by the British Board for Film Classification. Software products depicting human sexual activity or acts of 'gross' violence has been subject to BBFC classification since the Video Recordings Act, 1984, and since September 1994 over 40 software products have been officially classified by the BBFC.

Now, however, the government appointed body is claiming interactive software takes much longer to assess than movies or videos and that they should consequently be subject to a higher classification fee. This could put the charge of new releases up from £1,053 to £1,755 according to CTW, the industry trade weekly.

The BBFC claim a price rise is necessary because they were running at a loss while charging the same rate for games as for video. Sections of the software industry, however, have seen the proposals as potentially damaging.

Telstar is one software company who will be affected. At the moment they are focusing their attention on CDs and with the establishment of the new adult label and the higher classifiaction fee, they feel it will be costly. Telstar's Gary Bracey understand the BBFC's problems but believes "they should look at two price bands – one for multimedia products, which include a lot of linear content, and one for games produtcs which do take longer for them to explore."

Roger Bennett, General Secretary for the industry's self-appointed watchdog, ELSPA, warned: 'It could undermine the way in which this industry is taking a responsible attitude and the way in which we distribute software for consumer use." He continued: "If it's going to cost so much money for certification, some people will say to hell with it, let's take a risk. We can't afford that to happen – nor can the BBFC. "

Though Bennett was mainly concerned that the BBFC's proposal would damage the good work ELSPA and its members had so far undertaken, there is also the danger that a rise in production costs could deter some developers from making adult-themed titles entirely. "I would hope," he commented, "that the Home Office will take into account the fact that not all software publishers are in a position to pay that much."

At the time of writing, the BBFC's proposal has yet to be approved by the Home Office. In the meantime, a meeting is set to take place between ELSPA and the Home Office at which Bennett will vigorously defend the software industry's position.

Aiwa undercut CD competition

In what is already a highly contested area of the peripheral market, the CD drive competition is set to become even more heated following Aiwa's decision to drop the price of its SCSI compatible ACD-300 unit to just £149.

The stated price is not inclusive of VAT, but it emphasises the continued downward trend for CD drive prices as the medium grows in popularity. Amiga users will also be encouraged by the fact that the drive is being marketed as an ideal option for the Amiga range of computers.

The verdict on whether quality has been compromised to cut cost will have to be reserved until *Amiga Computing* undertakes a full review, but the ACD-300 is already a clear winner in the looks department.

It will also boast a competitive array of facilities. As well as being SCSI compatible, which means it can be connected to your computer along with six other peripherals, it also features an unusual large LCD display that indicates the drive's SCSI ID and whether or not it is terminated. The makers claim this will help beginners avoid two of the most common oversights when connecting CD drives to their computers.

The drive's facia will boast audio CD-dedicated operation buttons that will allow it to be used as a CD player without software like Jukebox, while at the heart of the machine a dual-speed drive makes the ACD-300 fast enough to take on higher priced rivals.

For more information, call Aiwa on 0181-897 7000.



Amiga portables in pipeline

Silent Paw Production hope to have portable Amigas ready for delivery by September this year according to MD Shawn Randolph. With a name derived from the acronym for Portable Amiga Work Station, the PAWS product range could give the Amiga market the lightweight version of the computer that has been missing until now.

PAWS is set to include an STN or TFT active colour display, a trackball, Link it, Cross Dos 6 Pro, and a simple guide to assembly. Silent Paw Productions also plans to release the Gecko, a small external box that will allow for the use of the Amiga with any VGA monitor in any Amiga display mode. The company will be releasing pricing detail in the near future.

ELSPA crime unit catches 'The Fly'

Scottish Trading Standards officers have arrested a man on suspicion of involvement in a multi-million pound fraud operation following a tip off from ELSPA's software crime unit.

Following the arrest of a man from Airdrie, the police found over 1,500 counterfeit gold CD-ROMs featuring games and business software plus duplication hardware. The police raid also uncovered large amounts of allegedly pirated floppy disks.

According to John Loader, ELSPA's chief investigator, the haul represents the biggest success for the organisation's crime unit to date.

Company check-ups on net

The day when mail order via the home computer becomes a normal method of shopping has come a step nearer following the establishment of the Netcheck Commerce Bureau on the Internet. With many net users still wary of buying products over the Web, it's hoped that such sites will increase consumer confidence by offering added consumer protection.

NetCheck will be a place where potential customers can check up the history of a company before they make an order. It will also allow consumers to file any complaints they may have about less scrupulous net sellers.

Mr Thomas Abbott, president of the Netcheck Bureau, said: "We felt that a modern and effective approach to regulating ethical business standards has long been overdue. Being interactive allows for lower membership rates for companies that elect to become members and a more efficient reporting system for the consumer."

Bona Fide companies should be encouraged to join up with the scheme by the fact that the history files in Netcheck will link directly to their homepage. There will also be a monthly newsletter making site users aware of newly-joined members.

While waiting for similar sites to spring up on this side of the Atlantic, UK net users interested in mail order can take a look at NetCheck at http://www.magicnet.net/netcheck.

Almathera's top ten

The Amiga CD market is to be graced with yet another bargain following Almathera's release of their Ten on Ten package. With the price set at just £39.99, the bundle comprises 10 CDs featuring content that ranges from entertainment to serious applications.

Ten on Ten will include CDPD1 and 2, World Atlas Vista, Pandora and Team Yankee, a 3D action sim for game lovers. Unsurprisingly for the price, some of the material has been around for some time, but there are three new CDs including a Networking and Comms disc that will not be published individually.

Almathera are only producing 3000 units of Ten on Ten because they plan to release it as a limited edition pack. It can be ordered directly form Almathera on 0181-687 0040.



Fountain of knowledge

In the month in which Escom outlined plans for the future growth of the Amiga technology, there was also good news for the existing range of computers following the announcement of a new tool that will build knowledge-based systems on the Amiga platform.

Simply named KBTools, the new development allows complex expertise to be encapsulated on computer and then made available for use by non-experts. Bearing similarities to systems that have already been used in medical, legal and financial professions, the inventors claim KBTools will be able to provide reliable advice to its users on a range of complex matters.

So far the designers have created a system that will guide users through the difficult issues involved in planning a building project and writing a contract. Apparently, KBTools asks a number of questions guided by its internal models, and then decides which issues are important before compiling the text of a draft contract. It's claimed that the technology is unusually capable of coping with the grey areas that such matters give rise to.

Despite scepticism in some quarters about the current Amiga's capabilities, KBTools' designers chose to use it in preference to rival platforms. In fact, they're claiming that ease of use and speed of KBTools is due largely to the unique strengths of the Amiga hardware and operating system.

Samaritans' helping hand reaches the Internet

Having offered emotional support to members of the public for decades via the telephone, the Samaritans moved into the 21st century with the decision to launch e-mail access to their service.

The move follows on from the success of a pilot scheme run by the organisation's Cheltenham Branch. In its first six months the experimental project received 526 contacts, 47 per cent of which were male, 28 per cent female and 25 per cent unknown.

According to the Samaritans, the e-mail scheme has proved to be an effective way of reaching young men, a group which they say is statistically at particular risk. They also suggest that the anonymity of the Internet encourages openness on the part of the service users, with 80 per cent admitting they had suicidal feelings. This contrasts with the normal telephone helpline where only 25 per cent express suicidal thoughts.

The organisation felt a new approach was necessary because of the rising suicide rate among men of 15-24 and 35-44. Sixty volunteers are being trained in order to respond to increasing numbers of e-mail callers, and as more branches come on-line its predicted that response times will quicken.

"It is encouraging that more men are calling us, but there is a long way to go before we start to reverse the trend of male suicide," commented Simon Armson, The Samaritans' Chief Executive. "E-mail is an effective way of reaching a group who are at risk of suicide, and difficult to reach out to. We will continue to increase accessibility to our service."

Net users can communicate with the Samaritans by e-mailing them at **Jo@samaritans.org** or, if they prefer to remain anonymous, **samaritans@anon.penet.fi.** The service will respond within 24 hours.

News briefs

Fall of the dinosaurs

Optonica's educational CD, Insight Dinosaurs, is about to be released at a new price of £19.95. Widely acclaimed by the specialist press as one of the best multimedia titles available for the Amiga, Dinosaurs is now even more appealing following its fall in price from £39.99.

For more information, contact Optonica on 01455 558282.

Emulation insight postponed

Those readers that have been looking for the article on PC and Mac emulation advertised in last month's issue are also owed an apology. Though we intended to include it in this August issue, the sudden increase in activity on the Amiga front meant the feature had to be postponed. However, we hope to bring you the full guide in next month's *Amiga Computing.*

Moving words

Diskotech have developed a brand new collection of animated colour fonts for the Amiga and are releasing them at a budget price. Named Moviefonts, the package features fonts that are compatible with paint packages like Deluxe Paint 3 and which work in all screen formats.

The series of 12 fonts costs £35 and can be obtained from Diskotech on 01591 620242.

Compuserve accelerator

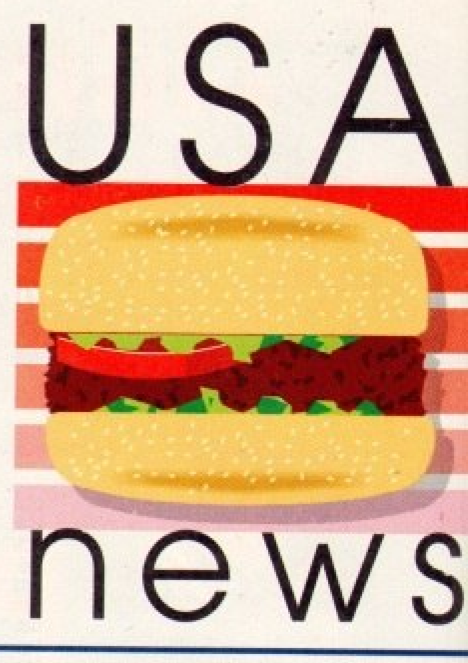
Compuserve, the user friendly on-line service, has announced its intention to introduce v.34 dialup access throughout Europe. It's hoped that this will increase the speed of access and ease of use for its users.

Oops once more

Amiga Computing is forced again into its occasional ritual of eating humble pie, following the omission in last month's TV Paint review of a few important details.

The excellent paint package is available from Activa (call 0181-402 5770) at £495 for the standard version. However, full-time students or customers upgrading from any other paint package can obtain TV Paint for £395.

Shock the monkey



Denny Atkin opens the door on the secrets of music success

The company known as young monkey (sic) began as the vision of two musicians. Over a decade ago, it was just two people, an analogue drum machine, two analogue synthesizers, a Commodore 64 and lots of hoping and dreaming. Now, young monkey studios have grown to include a professional audio/video studio that's worked on film scores, audio recordings, and even two top-ten alternative dance songs. young monkey studios still don't have any capital letters in their name, but they do have a suite of impressive Amiga music programs they've decided to polish up and share with the Amiga community.

SIMthesizer is a waveform generator/modifier that combines multiple synthesis technologies, including analogue, digital, wavetable, additive, subtractive, granular, frequency modulation, phase modulation, waveshaping, phonetic speech, Ghunga, Re-Haus and others. Hardware components used in early analogue synthesizers often coloured sounds with parasitic variations.

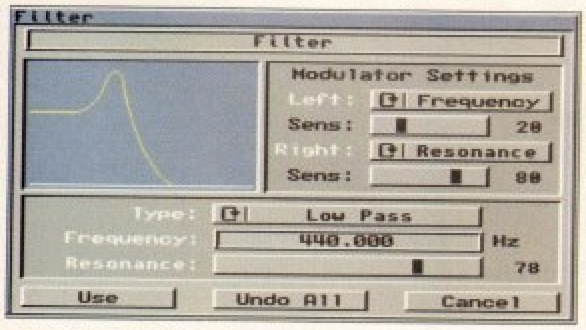
Though sometimes unwanted, these variations could be used to enhance sounds. SIMthesizer has a set of parasitic parameters you can use to create subtle or extreme variations on existing sounds. Noise signature profiles of various commercial synthesizers are included as well. One particularly handy feature is that every original copy of SIMthesizer will have a different internal Parasitic factor. This ensures that sounds created on one copy of SIMthesizer will not sound exactly the same as those created on another.

FULL SUITE

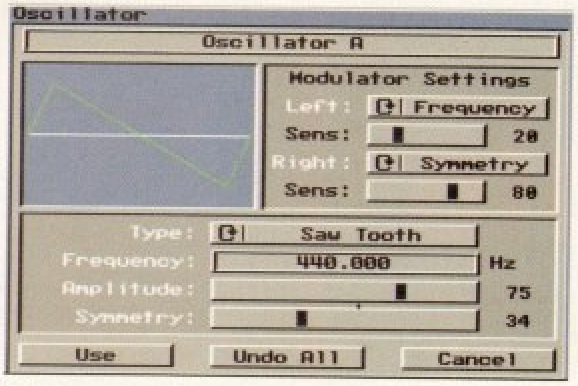
As well as generating new sounds, SIMthesizer's extensive waveform modification features can be used to enhance existing sound sample data. You'll find a full suite of filters, transforms, feedback, echo, and delay parameters, as well as fully programmable envelopes. A sort of ADPro for sound, SIMthesizer will load and save samples from 8 to 32-bits in size, in formats including Raw, IFF 8SVX, AIFF, NeXT, Sun, Wave, U-Law, A-Law, AVR, Mac, IRCAM, Voc, SampleVision, and more.

WaveFormer is a waveform editing system designed to work as standalone or in conjunction with professional sampling hardware and third-party audio cards. Support for hard disk recording hardware is planned.

Among the included waveform transformation capabilities are morphing, enhanced digital effects, Fourier analysis and transforms, free-hand edit, algorithm editing, and cross-fading. An undo capability allows you to experiment with your sample



Just like a traditional analogue synth you can set up filters...



View your waveform on an oscilloscope

modifications. WaveFormer includes many time-saving features, such as free-hand repair mode which adjusts bad sample data. For example, given a sequence of sound levels '0 5 10 32767 10 0,' the level 32767 is very likely to be incorrect. To repair it, simply drag the mouse over the offending sample and it is adjusted to '0 5 10 5 10 0.'

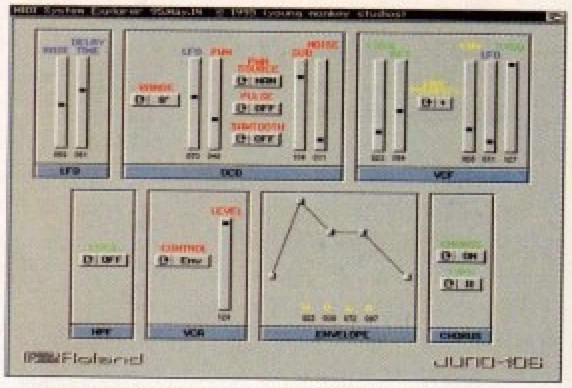
MIDI SYStem EXplorer is an extensively configurable MIDI exploration system, including a patch editor, librarian, control system and much more. Features include extensive customisation which allows the user to design standard interfaces for all MIDI products connected to the system; customisable layout, fonts, gadgets, images, menus, MIDI events, and more; the ability to enter MIDI information from a device's user manual and configure a custom interface to access parameters; support for all MIDI events; ability to edit individual parameters on devices that only support patch dumps; and ability to make edits without the MIDI device connected. Patch/Librarian data is stored in MIDI standard format, for easy import in other software.

Finally, the creatively-named Sampler Utility supports Standard MIDI Transfers and will also read and write many popular sampler disk formats on standard Amiga disk drives. The product allows auditioning of waveforms and will display patch/tone lists, parameter information, and other vital data. Like all the programs, it features full data conversion capabilities for the formats mentioned for SIMthesizer.

As well as operating independently, a special software control system will allow integration of these programs with each other. For example, you can directly read waveform data from a sampler disk (via the Sampler Utility module) into a waveform buffer within WaveFormer.

In addition to other software products not listed here, young monkey are currently developing low-cost DSP and MIDI hardware for integration with their software and third-party applications, and as a completely unrelated public service, young monkey has written a free text-to-Braille conversion program.

For information on these programs, write to info@youngmonkey.ca or dhomas@unb.ca on the Internet. If you're still corresponding the old-fashioned way, young monkey can be reached by writing to young monkey studios, 797 Mitchell Street, Fredericton, NB, Canada, E3B 3S8.



...but unlike most original analogue synths, you can also configure MIDI options

ZIP goes inside

Iomega's little Zip drive has taken the computing community by storm. This little $199 SCSI drive works great on Amigas, Macs, and PCs and stores 100Mb on disks available as cheap as $15 in quantity. On the Amiga it can be used for additional hard disk-style storage, as well as for backup and for easily transferring huge files to other Amigas, PCs, and Macintoshes.

Although the Zip drive uses 3.5-inch disks, they're thicker than standard floppies, and the drive can't read normal floppy disks. Also, the drive has only been available in an external version which can be annoying for those with Amiga 2000s, 3000s, and 4000s with empty drive bays.

Utah-based Iomega have announced that they will address both of these problems with new products that will be available this Autumn. The first is an internal Zip drive, but even more interesting is a combo model that incorporates a Zip drive and a conventional 3.5-inch high density drive and fits in one full-height drive bay. Hopefully, the latter model will be adapted to work with Amiga high-density disks as well. An Iomega spokesman said the internal combo drive should sell for about the same price as the external Zip.

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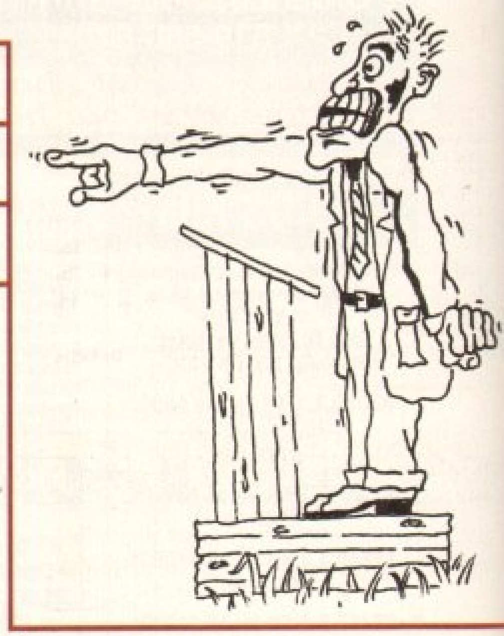
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Pulp faction

Quentin Tarantino pulls out a large baseball bat and sets to work on the competition



When's an exclusive not an exclusive? When somebody else has done it already. Along with sexual innuendo, the word 'exclusive' is a magical set of letters that can make customers pull out their cash and up a mag's ABC by a few hundred – they want the latest and most up-to-date information. Misused, abused and downright corrupted for many years, there would seem to be no readdress for those who actually got the story first and then are subsequently duped as another publication states they have the world-first 'exclusive.'

Take, for example, the Cyberstorm 060 card – a phenomenal piece of kit by any standards – that was reviewed in the June issue of these pages. The magazine was on the shelves by 4 May 1995. One of our competitors – bless them – had their June issue surface on the 11th of that month, and they had the Cyberstorm 060 card hyped on the cover.

The difference is obvious, though, because plastered above the competitor's Cyberstorm hype was that word – exclusive! Not true, we'd beaten them to it by over a week. Turn to their review of the product and again the word 'exclusive' beams up at you from the page – it just ain't true.

"Why not plaster that wondrous word on your cover as well then?" you ask. Unlike certain competitors, we'll only use 'exclusive' when it is one (witness Lightwave 4). We were not in a position to say that the Cyberstorm 060 was a guaranteed exclusive. Nor were the competition. We didn't use the word. They did.

The principle reason for avoiding the word wasn't out of fear that the opposition would reprimand us for it, because they won't – it's simply that we like to treat our customers with some respect and give them the honest story. Consumers are easily hacked off when they feel they're being shafted and they'll take their money elsewhere.

This kind of undercutting the competition is typical practice on the road to big ABCs. On the release of Doom 2 on the PC, various magazines brandished that word as they proclaimed they were first. As usual, one of our publications got there first, but many of the other mags ploughed on regardless with their 'exclusive' banner.

Perhaps this all sounds like sour grapes, but the overuse of 'exclusive' reveals a deeper problem with the current crop of Amiga mags – that of making a quick buck.

When Commodore went belly up last year, there was a change to certain competitors that may not have been immediately obvious to Joe Public. While certain mags beat their chests for standing next to the Amiga through thick and thin, their actual content reveals a different story.

PAGINATION

While *Amiga Computing*'s pagination (page count) has fallen like our competitors, our editorial content has stayed pretty much the same – the only page losses have been mainly in advertising because of Commodore's demise. We could easily fill our editorial with games, games and more games like some of our competitors have done – pages of tips, cheats and other space-filling devices are used to give the customer the feeling that they're getting their money's worth when they pick up the magazine.

We, on the other hand, use our pages to show the Amiga off to its full extent and to inform you, the reader, of the machine's potential skill after all this time – special effects companies, how to use your Amiga to make money, interviews with the movers and shakers in the industry, tutorials, pop promo makers, useful cover mounts such as CDs and supplements, 'exclusives' on groundbreaking packages, the continual coverage of the Commodore buyout, and Wallace and Gromit!

Other competitor's thick tomes are stacked with buckets of promotional material to make some fast cash – gimmicky offers that no-one really needs or particularly wants.

This kind of change, which has become increasingly apparent over the last year, would suggest that the people at the top of certain publishing empires have decided the Amiga has had it, and therefore want to screw as much money out of their readers as possible while the market lasts.

The basic message is simple – if you want value for money that isn't going to break the £4 mark until is absolutely necessary, *Amiga Computing* is the honest, informed and professional choice. AC

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HP. Deskjet 660 colour	£27.99
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SPECIAL LIMITED OFFER!! Workbench 2.1 upgrade kit, includes 2.05 ROM/software and manual £64.99

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The Cover Disks

Personal

Before you begin

You will need to load Workbench before using the Personal Paint disks as it is not a bootable disk.

Also, be sure to click on the readme icon. This contains important information about loading the program and using it in systems with low memory.

Personal Paint 4

Supplier: Cloanto Italia srl
Workbench: 1.3

It's a very rare thing indeed to find an art program which combines excellent drawing features along with equally excellent image processing functions. Personal Paint 4 offers just such a combination and in conjunction with Cloanto, we bring you the fully-working and unrestricted version 4 of this powerful art program.

The inclusion of image processing functions means you can 'clean up' and add special effects to your pictures with ease. Do you want to create an embossed look for your picture? Simple, just select the emboss function from the image processing menu and away you go. You can even apply image processing functions to specific parts of your picture by using the mouse to define the area to which the process will be applied.

There are excellent brush features available which allow you to cut out a part of your picture to use as a brush. Some of the more special brush features include the ability to chop unused planes from the brush to save lots of memory. Essentially, the more colours on screen, the more planes within RAM required to describe the colours.

COLOUR COUNT

Personal Paint's chop planes function counts how many colours are actually used in your brush and then reduces the number of planes to the minimum required to display those colours. This saves memory and reduces the brush file size when saving it.

You can have up to nine brushes within memory and can flick between them using the numeric keypad keys 1 to 9. You can also apply all the image processing functions to the currently selected brush too. Another memory and space-saving feature is the ability to alter the number of colours used for an entire picture. The Less colours function lets you alter a slider to reduce the number of colours in a picture and as you do so, Personal Paint shows you an instant preview of how your picture looks as you lower the colour count before you make the change permanent.

Personal Paint lets you work in up to 256 colours and allows you to save your pictures in a variety of file formats such as PCX, GIF and even C source code for all you C programmers.

Other features include a really good magnify option for those tricky details where accuracy is required. There are an incredible 46 levels of magnification for even the most chronic of perfectionists among you. It takes full advantage of the many different screen resolutions available on Amigas and even works well with many of the popular RTG

Personal Paint special offer

If you think version 4 of Personal Paint is good, you will be amazed at what is available in version 6.3. If you are interested in upgrading to version 6.3, check out our Personal Paint special offer on page 20 for details on how to get hold of one of the best paint programs on the Amiga

Image processing functions available

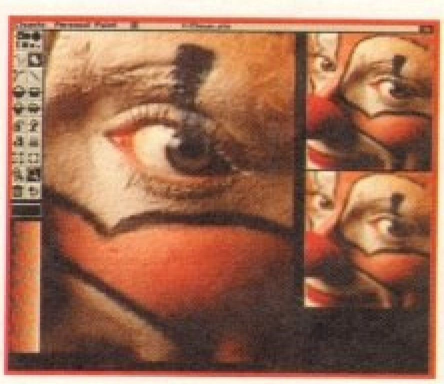
There are over 30 image processing procedures to choose from and you can even edit your own.

- Blur high
- Blur low
- Dark vertical gradient
- Darken -25 %
- Various dither functions including floyd-steinberg
- Edge detect
- Emboss high
- Emboss low
- Light-dark oblique gradient
- Lighten 25 %
- Negative
- Randomize high
- Randomize low
- Randomize oblique
- Sharpen high
- Sharpen low

And many more functions besides



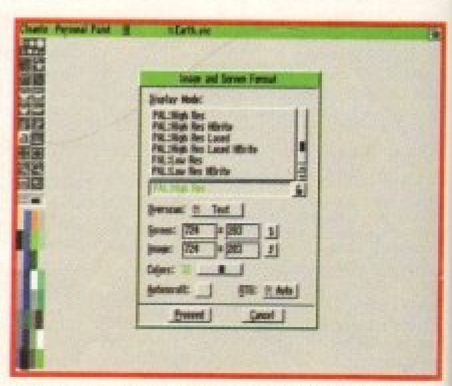
There is a comprehensive collection of image processing functions available for touching up your pictures



With the magnify tools, you can get close in and personal for accurate drawing



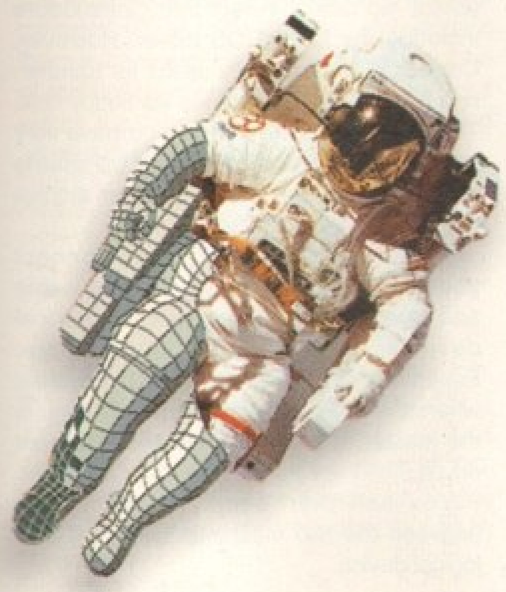
Personal Paint allows you to add all kinds of exotic fonts to your picture



You can change Personal Paints' default screen to take advantage of those glorious high resolution screen modes

painting

Get artistic with our fully working version of Personal Paint 4 and check out the great collection of utilities to make using your Amiga even more of a joy than it already is

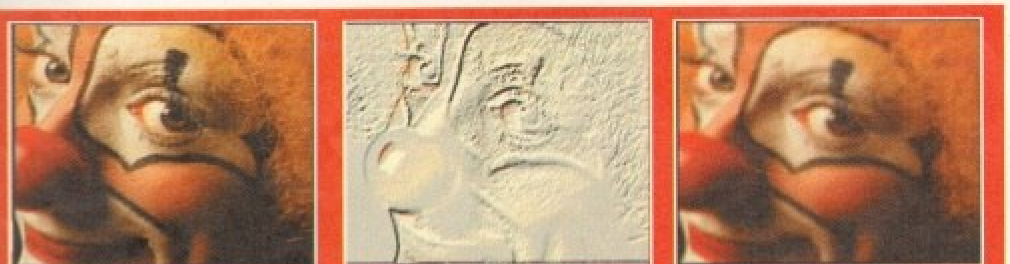


graphics cards. Personal Paint features a similar interface to the old daddy of art programs, Deluxe Paint, with a toolbar and menu for accessing the many features available.

There are also the usual and useful keyboard shortcuts for quick selection of many of the major functions such as Save and Load picture.

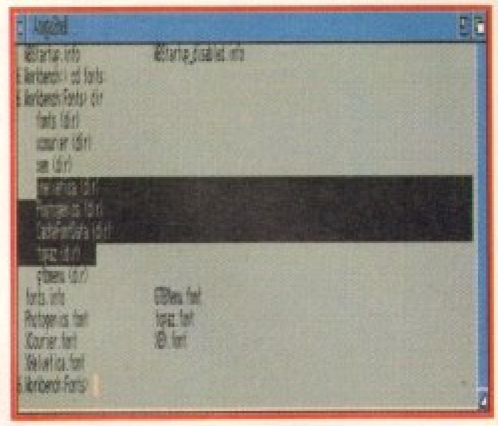
For a small incentive, there are some example pictures available on the CoverDisk for you to load into Personal Paint and experiment with.





Here are the results of just a few of the many image processing functions available. From left to right – normal, emboss high and blur high

Utility heaven 2



With PowerSnap, you can copy text from anywhere on the screen and paste it with ease

PowerSnap

Author: Nico francois
Workbench: 2.0

If you have ever used a quality Word processor, you probably know how useful it is to be able to select a block of text on screen and either copy or cut it and then to paste it elsewhere.

Unfortunately, not all utilities and programs offer this feature. PowerSnap provides a simple solution to this problem by providing such cut and paste features itself. The only limitations are that it only works with non-proportional fonts up to 24 pixels wide and any height, which should cover most users' needs.

To try it out, simply double-click the PowerSnap icon and you can then position the mouse pointer over a character on screen, holding down the left Alternate key and press the left mouse button.

At this point, after a short delay depending on the size of the font, the screen will either flash, meaning PowerSnap didn't find a character at that position, or the character will be highlighted. You can then drag the mouse while keeping the left Alternate key and the left mouse button held down to select further characters.

Once you are happy with what you have selected, releasing the Alternate key will copy the selected characters into the clipboard. You can then paste the copied text by pressing the Alternate and V key or by pressing the Alternate key and the right mouse button.

Move

Author: Asher Feldman
Workbench: 2.04

Move is a simple utility which provides a Unix-like move command, allowing you to move files from source to destination rather than having to copy them and delete the originals from the source.

Those of you with a directory utility will probably be familiar with the move feature, and Move provides the same function via CLI Shell. It can also be used as a rename command and supports all standard wildcards.

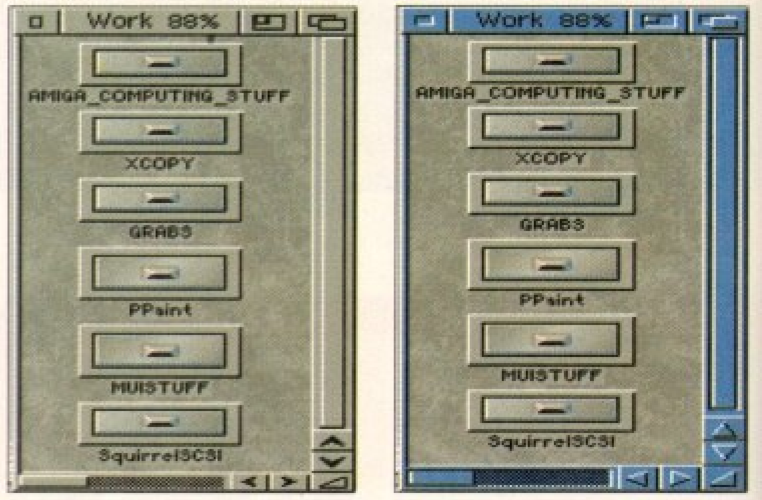


Sysihack

Author: Mr Boopsi
(well, that's what the docs say!)
Workbench: 3.0

This neat hack allows you to alter the sizing gadgets and scroll arrows to look nice in screen resolutions which have a 1:1 aspect ratio. You can also give the gadgets a 3D look

The program is called from the Startup-sequence file in your S: drawer. It needs to be called before IPrefs. There are various parameters available and are described in detail in the Sysihack documentation file, so refer to this for further details.



Here is a before and after shot of your average Amiga window gadget showing the much improved Sysihack version

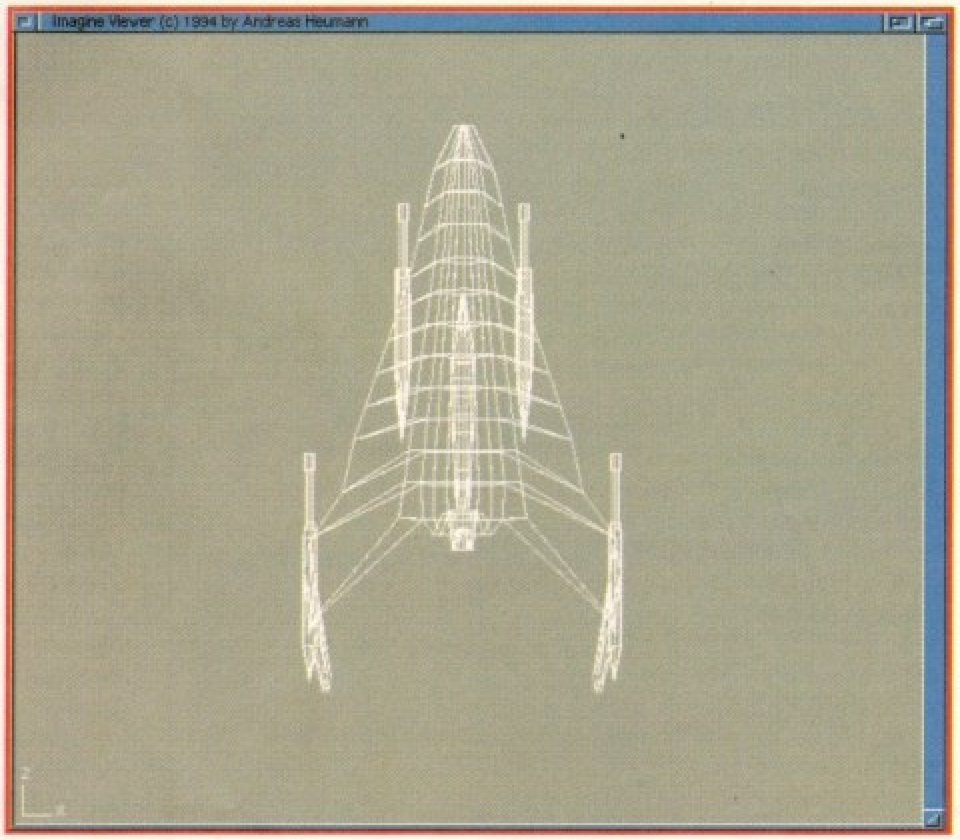
Showobj

Author: Andreas Heumann
Workbench: 2.0

This is a useful utility for those 3D addicts who own either the Imagine or LightWave 3D software. It is a handy object viewer which allows you to load any Imagine TDDD or LightWave LWOB format object.

Showobj can display the object loaded in three different modes – bounding box, wireframe or solid. There are also four views available – front, right, top and perspective.

In perspective view, the object can be rotated using the mouse with the left button pressed, or can be zoomed by holding the right mouse button down.



Quickly view your Imagine and LightWave objects with this handy utility

PC to Amiga Transfer

Author: Michal Kara
Workbench: 2.0

There are times when being able to transfer files between a PC and an Amiga are quite useful. So useful in fact that Commodore included the CrossDOS driver. However, CrossDOS is only really useful for transferring files between machines via floppy disk. This is very restrictive when you have very large or lots of files to copy, and will usually require you to use lots of disks or archive the files.

PC to Amiga allows you to connect your Amiga to a PC via a serial cable and to access the PC drives like normal devices connected to your Amiga. Essentially, this is a master-slave system where the PC is the slave and the Amiga is the master with control over the PCs hard drives.

You can then simply transfer files between the two machines using the PC: logical device.

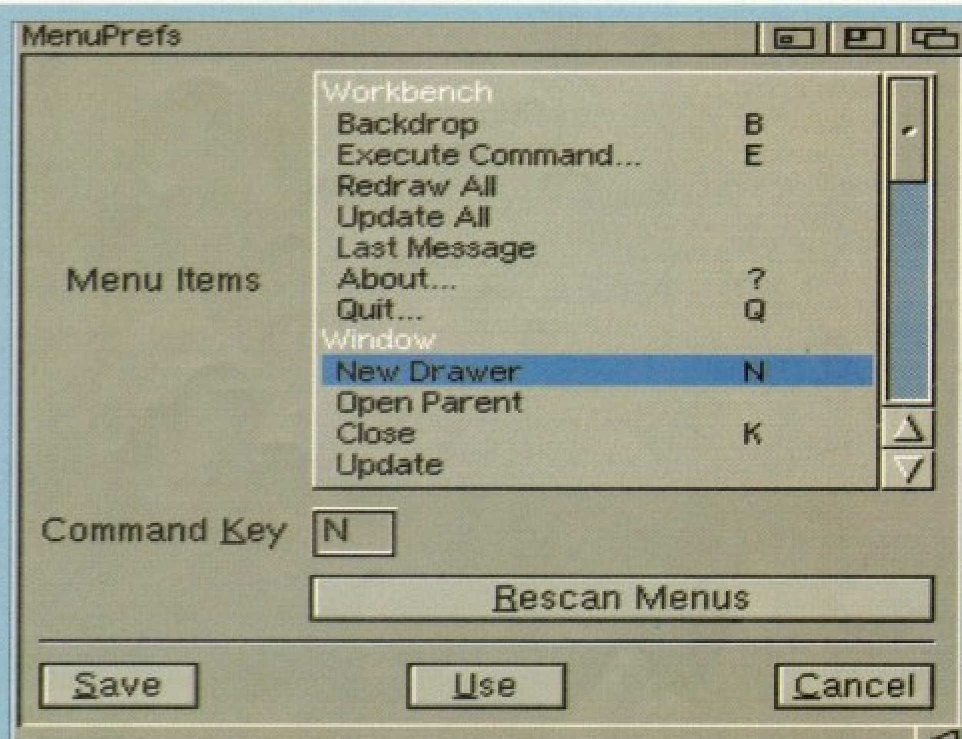
MUI madness

No doubt many of you have installed MUI given away on the July issue CoverDisks. If so, here are some more MUI applications for you to enjoy. If you didn't get the July issue (shame on you) we still have some back issues, so check out the back issues page for details on how to order.

MUIProglist

MUIProgList is a simple text file compiled by our very own Ben Vost from the Aminet archive list. It details the many MUI programs which are available and where they are within Aminet.

Those with access to the Internet can access the Aminet archive at the address ftp://src.doc.ic.ac.uk/aminet. Or, for those who are Internet-less, there are many Aminet CD-ROMs available through all good PD libraries.

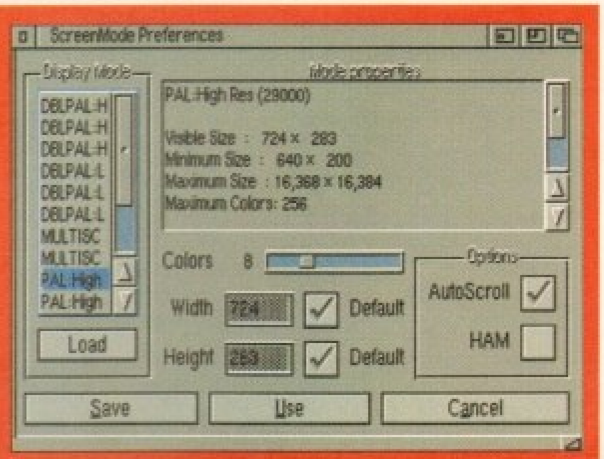


Change or add your own keyboard short-cuts for the standard Amiga Workbench keys with ReKeylt

MUIScreenMode

Author: Cyril Deble
Workbench: 3.0

Although the Workbench Screenmode utility in the prefs drawer does its job, it would benefit from a MUI facelift. So, here's the latest version of the MUI screen mode utility for all you MUI addicts to replace the drab Workbench version. Simply double-click on the install icon to update your older version



This is the very latest and more enhanced MUI version of the standard Workbench ScreenMode utility.

Faulty CoverDisks

If you should find your *Amiga Computing* CoverDisk damaged or faulty, please return it to:

TIB Plc, TIB House, 11 Edward Street, Bradford, W. Yorks BD4 7BH.

Please allow 28 days for delivery

Shareware delights

Shareware authors produce some excellent Amiga software which often enhances your Amiga life. If this wonderous state of affairs is to continue, you must support these authors or they may disappear along with the great software they write.

So, check out the supplied program documentation for the software described here to see what the author is requesting in terms of payment. Quite often it's free, so just send them a thank you note. If there is some form of registry payment required, you can bet it will be a pittance and well worth it. So send off your cash and support the author.

ForceIcon

Author: Kai Iske
Workbench: 2.0

This is a useful utility for those with CD-ROMs or networking software of any kind. It allows you to snapshot an icon for devices which normally don't allow this (such as CD-Roms). You can thus set its position or give it a much nicer icon than the default used by Workbench.

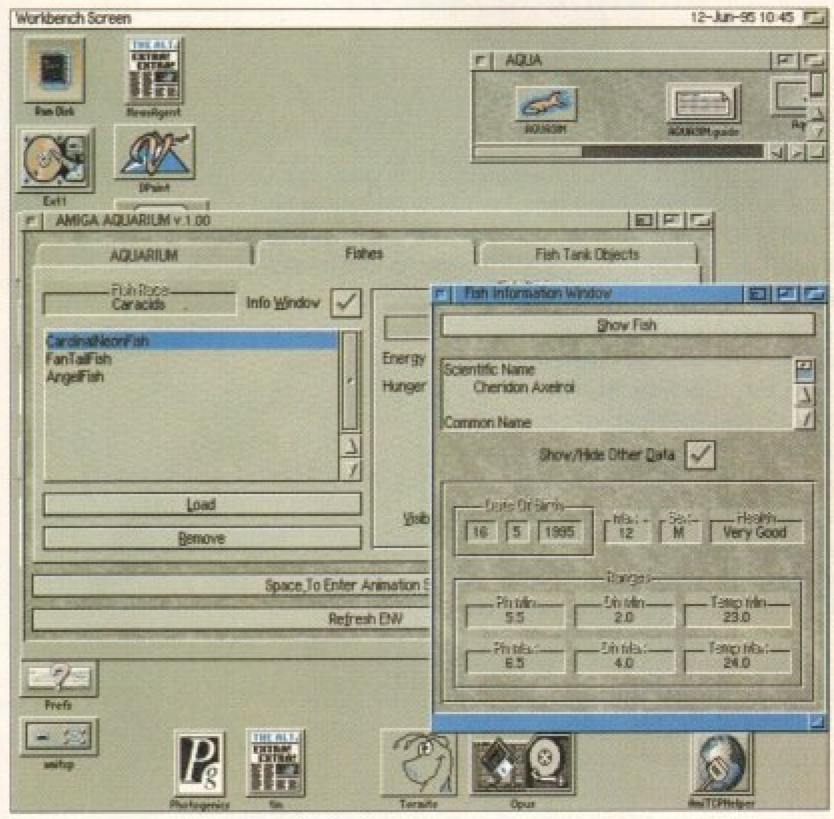
AquaSim

Giuseppi Chiesa
Workbench: 2.0

They say that watching fish swimming around in an aquarium is supposed to relax you. Well, life on *Amiga Computing* can be quite stressful at times, especially when you have Judith 'Deadline or death' Chapman, our beloved Production Editor sitting next to you.

So, I was quite relieved to find this curious and entertaining little program which simulates life in a fishtank. The idea is to keep your fish alive by altering various parameters in the program which control feeding, temperature, oxygen levels and other things required in such a fishy microcosm.

So, when you find yourself slowly approaching boiling point when using your Amiga, fire up Aquasim, sit back, and watch the aquatic lifeforms go about their business, letting the tranquil serenity of their little lives wash over you.



There are lots of parameters to change and decisions to be made to keep your fishy friends happy and healthy

ReKeyIt

Author: Michael Barsoom M.D
Workbench: 2.0

This excellent utility allows you to alter the default keyboard shortcuts for the Workbench menu items. What's even more useful is that you can add keyboard shortcuts for those items Commodore didn't assign a shortcut for, such as Snapshot all.

Also, users with Workbench prior to version three didn't have the very useful and handy Icon cleanup shortcut (right Amiga and period key). I am always using this to tidy up icons within windows prior to quickly saving them with the icon Snapshot key.

Well, this sorry state of affairs is now history, as you can start changing and adding your own keyboard shortcuts to your own personal tastes. When you run ReKeyIt, it will display the currently assigned shortcuts in a scrollable list view. To change or add a shortcut, simply select the appropriate menu item and then enter the key to be used in conjunction with the right Amiga key for the shortcut.

NewEdit

Author: Paul Huxham
Workbench: 2.0

Have you ever wanted to paste something into a string gadget box within an interface, or wished their were more useful edit functions available?

Well, NewEdit provides additional functions for those of you who have.

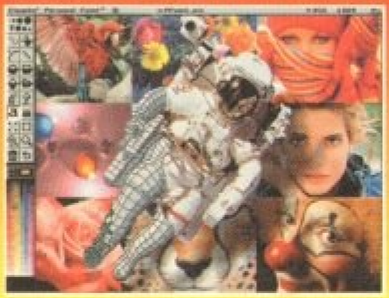
NewEdit is very useful when used in conjunction with the Powersnap utility (also on the CoverDisk) which provides selection, cut and paste features in programs which don't provide it as standard. You can thus cut and paste text from one source and paste it into a string gadget box from the clipboard.

NewEdit functions

Shift cursor right	next word
Shift cursor left	previous word
Alt backspace	delete previous word
Alt del	delete next word
Right alt cursor up	go to previous gadget (accepting contents)
Right alt cursor down	go to next gadget (accepting contents)
esc	leave gadget (accepting contents)
Right alt c or right amiga c	copy gadget contents to clipboard 0
Right alt v or right amiga v	paste contents of clip 0 to gadget
Right alt i or right amiga i	increments a numbered filename by one
Right alt g or right amiga g	toggle the case of indicated character
shift right alt g or shift right amiga g	toggle the case of characters until eol or alphabetic character is found

Personal Paint 6.3

Now that you've had a chance to play around with Personal Paint 4 on our coverdisk, why not upgrade to the latest version?
Available for only £39.95 on disk or even better value CD-ROM, Personal Paint v6.3 is a powerful and intuitive paint, image processing, animation and 24-bit printing package.

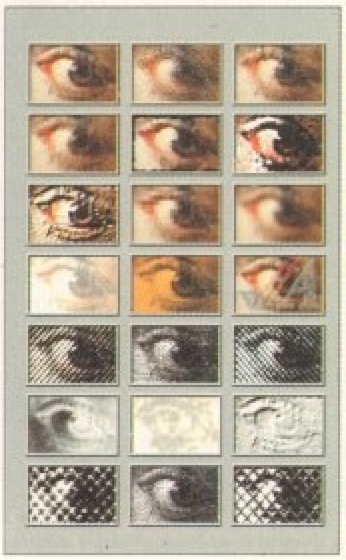




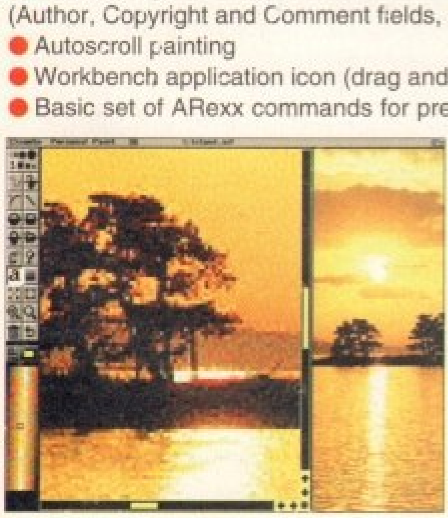
Animation Features: Storyboard, Superior Compression, Multiple Palettes, Frame-by-Frame Timing...

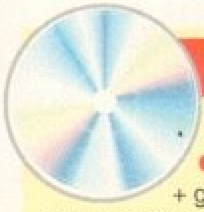
Features of Personal Paint 6.3 include

- Animation (featuring storyboarding, superior compression, multiple palettes, frame-by-frame timing, ANIM-5/7/8 and hybrid formats, etc.)
- New, faster image processing effects, including transparency, alpha channel and single-image stereograms (both SIRDS and custom pattern stereograms, as in 'Magic Eye')
- Sophisticated 'behind the scenes' memory management, including virtual memory (swaps inactive image data to Fast RAM and disk storage) and multiple levels of undo and redo
- First paint program worldwide to support the new PNG (Portable Network Graphics) file format. Includes an ARexx script to convert GIFs to PNG.
- Support of Retargettable Graphics (display cards like the Picasso, Retina, Piccolo, Rainbow, EGS, Talon, Cybergraphics etc.)
- Animation on RTG display cards (with or without double-buffering)
- Direct, high-quality 24-bit printing (Colour and Black & White) and interface to third-party software such as Studio Print Server



- Professional and fast modes for converting 24-bit pictures (IFF, PNG, PCX, PBM etc.) to 256 colours or less
- HAM, HAM8 and Picasso 24-bit viewer active during colour reduction
- External input/output modules (loaders and savers) for easy extensions and upgrades. Modules for IFF, PNG, PCX, PBM, Amiga DataTypes and several others are included. A GIF module is available from public domain sources.
- Support and editing of IFF, PNG and GIF project annotations (Author, Copyright and Comment fields, plus Amiga filenotes)
- Autoscroll painting
- Workbench application icon (drag and drop)
- Basic set of ARexx commands for presentations, format conversions and printing
- ASL-compatible file requester
- More power through machine language code: the software is, in part, up to 500 per cent faster
- 'New Look' user interface
- A collection of utilities, including colour fonts, new DeskJet printer drivers (up to four inks) and Jpeg DataType

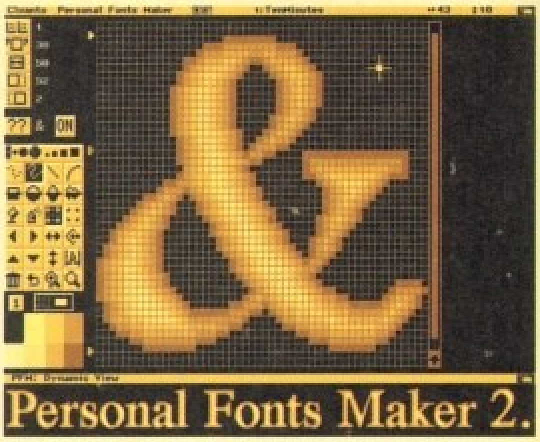




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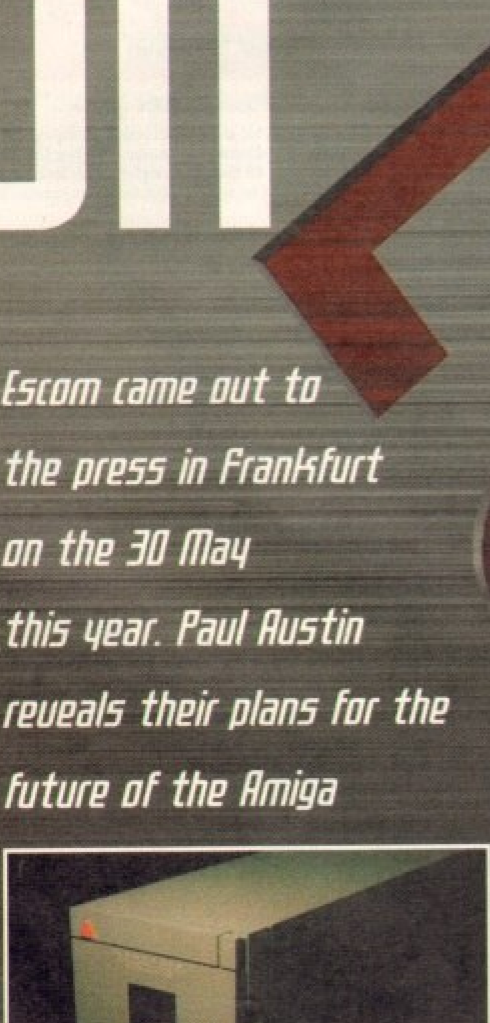
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The legend lives on



Escom came out to the press in Frankfurt on the 30 May this year. Paul Austin reveals their plans for the future of the Amiga



At four o'clock on a very average day in Germany, the Amiga's journalistic hordes descended on the foyer of Frankfurt's Park Hotel. Although well known for loitering anywhere that can provide a drink, this particular bunch, myself included, were in a serious, and dare I say even sober mood.

After collecting the obligatory press pass, the 100-strong band were ushered into a well-appointed conference room ready to hear Escom's vision for an Amiga utopia.

Alongside a huge Scala-controlled presentation sat the 11 men who plan to steer the Amiga out of the shadows. Centre stage was Manfred Schmitt, the youthful 45-year old founder of the Escom empire. Next to Herr Schmitt, and first to speak, was Petro Tyschtschenko, the general manager of the new Amiga Technologies GmbH.

After the usual pleasantries, business started in earnest by reaffirming the details regarding Escom's purchase of the former Commodore company – including all intellectual property rights, trademarks, logos, products and licences – and all for just 10 million dollars.

The end result of this is the formation of the new Amiga Technologies daughter company, which with the aid of various third parties will set about restoring and perhaps more importantly, expanding the Amiga's position as the ultimate multimedia and video graphic platform.

IN PRODUCTION

Much to the relief of the onlookers, Herr Tyschtschenko's first step is to resume production of the existing range. But perhaps more importantly, he also made a public commitment to continue development of what Escom believe is 'a superior technology.'

The aim is to restart production of both the A1200 and the A4000T – thankfully the standard A4000 has officially been canned in favour of an all new mini tower A4000T. Initially, the plan is to produce 120,000 A1200s and 25,000 A4000Ts, 10,000 of which will ship with 060s while the remainder stick to the traditional 040. Assuming things go to plan, the first units will be shipping by September/October '95.

Apparently, all the planned A4000Ts have already been pre-sold, no doubt in the form of bulk sales to major distributors. Needless to say Escom, or should I say Amiga Technologies, envisage plentiful supplies of both machines for the Christmas period.

Okay, the big question has to be what's the cost? Given the unbelievable prices of Escom's existing PC range, it's hard to envisage how they hope to produce an Amiga that can compete effectively with their PCs.

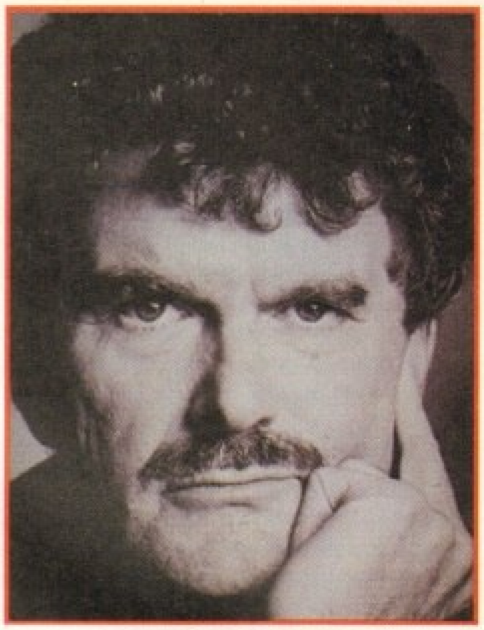
Well, although no specific unit costs were provided, the new company did deliver a breakdown of their projected turnover and monthly operating costs for the remainder of this year. In total, Escom expect a turnover, based on A1200 and A4000T production, for '95 to be 100,000000 DM – a figure which apparently will ensure break even for the new company by the end of the year.

If you then subtract operating costs of 600,000 DM per month and divide this figure into the number of machines to be produced, it doesn't require a genius to figure out a rough price per unit.

Assuming Escom's projections are correct, this all points to an A1200 retail price at, or about, 300 DM and an A4000T retail of roughly 2200 DM. Translate the above into sterling using an approximation of today's exchange rate and you're looking at £150-ish for an A1200 and roughly £1000 for an A4000T.

A rather surprising revelation was the announcement that Amiga Technologies also plan to go back into production with the CD32 in time for the Christmas period. However, they remained very sketchy when it came to actual quantities, although it was stated that the CD32 will undergo a major redesign by spring '96.

An obvious stumbling block in the race to restart Amiga production is the confusion surrounding Commodore's remaining inventory. According to Herr Tyschtschenko, all remaining stock in both the UK and Germany has been accounted for. Unfortunately, the rumours regarding large quantities of ready-to-ship machines are exactly that. In reality, any new production will be strictly from the ground up.



ProfessorHartmutt Esslinger: President of Frogdesign

> Amiga Technologies will set about restoring and, perhaps more importantly, expanding the Amiga's position as the ultimate multimedia and video graphic platform

It's obvious that the existing stock of European components takes the form of spares rather than ready-to-assemble machines. However, this did prompt the announcement of a European spares and distribution centre which should be active within the next four weeks.

A big question mark still hangs over the huge inventory still held in the Philippines. Apparently, negotiations are still in progress with the local trustees regarding, if and when, it will be made available.

With the commitment to future development, the obvious question has to be how they intend to do it. In reply, Escom announced a 50-strong support team at Escom's Bensheim headquarters. This central team will break down into development, developer support, resellers and users, production management, marketing, PR and administration.

In addition, the company has also taken ➤

The naming game

As you may have spotted, the word Commodore has been notable only by its absence. As part of its buy-out, the entire Commodore empire went under the hammer – including the Commodore name.

As a result, Escom can now add a recognised brand name to their own range of PCs. Until the Commodore acquisition, Escom had a real problem marketing their PC range through any other outlets than their own. Now that situation has changed dramatically courtesy of the Commodore title. You can soon expect to see the Commodore name traverse the high street to just about any retail outlet.

Initially, Escom plan to go into production with a range of fully loaded Pentium P75 and P100 multimedia PCs which will be assembled at Escom's existing production facilities. The plan is to sell between 50,000 and 60,000 before the end of the year, with initial production commencing in August. As far as Escom are concerned, there is now no connection between the Amiga and Commodore.

The Commodore name and product range will be strictly PC and controlled exclusively by Escom, whereas Amiga Technologies will be a completely separate entity that will only handle Amiga-related product lines.

With the long and painful demise of the old empire, it may seem a curios decision to re-badge their flagship PC products with the Commodore title. However, Escom are obviously confident that the decision is the right one. To back the decision Petro Tyschtschenko quoted a recent survey, commissioned by Escom, which stated that '93 percent of all PC owners know the Commodore name.' A figure only bettered by IBM.

However, there was no mention of how this impressive percentage actually perceived Commodore products in relation to its brand name opposition.

over Commodore's old development centre in Norristown in the US for additional R &D. This revived arm of the Amiga Technologies is to be headed by Ed Goft, former vice president and general council at Commodore.

All very positive stuff, but a question still remains regarding staffing. Since the Commodore demise, many key Commodore personnel have been poached by the likes of Apple. Let's hope the Escom revival can prompt a return to the fold for at least some of the key names in Amiga R&D.

PERSONAL VIEW

Following the initial scene setting, Manfred Schmitt mounted the rostrum to deliver his personal vision and to explain why Europe's leading PC supplier felt the need to rescue the Amiga from a premature end. Above all, Herr Schmitt sees multimedia as the future for Escom, and therein lies the most compelling attraction of existing Amiga Technologies.

With Escom's obvious success with assorted multimedia PC solutions, it seems a curious decision to risk existing success by reviving a machine which quite literally coined the phrase multimedia. However, when it comes to mass market multimedia, Escom see the Amiga, or more accurately its affordable technology, as the key to the technologies of the future.

> Multimedia isthe future for Escom, and therein lies the most compelling attraction of Amiga Technologies

It's highly unlikely you'll see the standard Amiga being marketed as the ultimate desktop solution, after all that would directly cut into PC profit margins. I'm certain, however, that many a black magic box offering all manner of interactive home entertainment, information and services will have an Amiga at its heart.

Escom are well aware of the Amiga's natural talents, not least of which is its effortless multitasking – which still out performs any other platform. In addition, the Amiga also performs the same tasks as a Windows-based PC with only one eighth of the system resources – a factor which of course has huge repercussions on unit cost.

Combine these natural talents with a liberal approach to licensing and you have all the ingredients for a plug and play interactive set top box with a natural affinity for video, in either PAL or NTSC.

Set top solutions

Escom see Amiga Technology bringing multimedia to the masses. To that end they've already thrown the doors open to all comers by promising "a very flexible and open-minded approach to the licensing of Amiga technology."

Aside from the return of the Amiga, Escom also plan to spread the gospel in the form of interactive set-top boxes. The company has already teamed up in partnership with US multimedia specialists VisCorp to produce a range of interactive multimedia applications, and plan to launch a range of pay-TV, video on demand, home banking, home-shopping and assorted on-line services with the aid of the Amiga's first ever licensing agreement. Aside from this partnership, Escom will be producing set-top boxes in Germany for 400 DM – approximately £200.

Aside from the urgent need for new machines, arguably the most import aspect of the Escom takeover is their approach to future development. To that end Escom have appointed Dr. Peter Kittel as the head of the product planning group of Amiga Technologies.

In the short term, the plan is simply to get the Amiga back into production and expand on the existing architecture of both the A1200 and A4000T. In the case of the A1200, this means initial production of the basic machine as sold by the former Commodore. However, by January '96 the plan is to re-launch the A1200 with an EC030 chip as opposed to the existing EC020. They also plan to add additional FastRAM on board to supplement the existing 2Mb of chip. The basic machine will ship with Workbench 3.1 as standard and will also be packaged with Scala MM300 as a freebie.

This raises the obvious question of how exactly Amiga Technologies expect the standard A1200 to run the Scala give-away, given insufficient RAM and the lack of a hard disk as standard.

After a brief silence, the reply came that any machines sold with sufficient resources will receive Scala as part of the overall package. However, anyone starting out with a basic machine will be given a free Scala upgrade when they've added the necessary enhancements required to run the software.

As you can probably see, the A4000T has not only seen a revival but also a complete redesign. Although the old Commodore empire only ever produced 1000 units, Amiga Technologies see the machine as the basis on which to build their high-end business.

The new machine takes the form of an all-new mini tower with the inspiration being the machine's traditional markets. The designer, Bjorn Rybakken, made the point that "the Amiga is a creative tool in creative environments, and it must therefore relate to this situation." The plan is that the new look will hopefully herald a dramatic change in perception of the machine.

RISCy decisions

As for pure mechanics there's little change, at least in the short term. The basic schematics point to a vertically loaded Zorro slot design with a user-definable array of lights in the pin cushion front panel, all lurking below an upper window – apparently designed to allow users to add their own images in an attempt to further customise the machine.

As mentioned earlier, the basic machine will ship with either 040 or 060 CPUs, the latter being designed in combination with phase 5 – the designers of the Cyberstorm 060 accelerators. As for



Dr Kittel: Any future computer should always remain recognisable as an Amiga

additional hardware, there are no plans to add a CD-ROM as standard until at least until spring '96. In addition, there also appears to be some confusion over the availability of high density disk drives. I only hope that Amiga Technologies manage to source a supplier prior to the planned production run.

Another uncertain element in reference to the A4000T launch is the availability of the newly designed mini tower cases. At the moment it remains uncertain as to whether the new design will be available for the initial production run. Only time will tell.

Obviously the various decisions regarding existing hardware upgrades and new software add-ons are all very welcome, but a question still persists regarding the long-term development of the Amiga.

In that respect, Amiga Technologies has already committed to RISC as the first step for the new engineering division. The first decision is which of the two dominate RISC platforms to opt for, the options being Motorola's PowerPC or the HP PA Risc. Both have advantages and disadvantages, Motorola's being their close association with the Amiga and indeed Escom, while the HP option does offer the potential for superior performance.

Regardless of who wins, Dr. Kittel has already stated that "any future computer should always remain recognisable as an Amiga, and should not simply be assimilated among the amorphous mass of similar computers."

The basic goal is to re-establish the Amiga's position as the machine with the best sound, graphics and relative performance of any mass market computer by incorporating support for 3D graphics, texture mapping, object-oriented design and other cutting edge technologies. According to Dr. Kittel, the move from CISC to RISC will not be as difficult as many imagine due to the basic Amiga concept which has always been designed with progress in mind.

All very optimistic, but the fact remains that the transition to RISC will take a minimum of 18 months, regardless of hardware availability. The reason for this is that any RISC-based Amiga will require a completely new operating system and that's what will require the 18 months of design and beta testing prior to launch.

During this interim period, it's difficult to imagine how Amiga Technologies plan to maintain the power end of the market given the existing RISC options on both the Mac and PC.

MacroSystems' solution

In my opinion, the only feasible solution is to opt for some form of RISC-based co-processing solution such as the system already near completion at MacroSystems as part of their pioneering work on the Draco digital video system.

The Draco is essentially a completely new 060-based computer which uses the Amiga operating system running a Retina 24-bit display rather than the standard Amiga chipset. The end result of this is a blisteringly fast machine dedicated to VLab Motion and Toccata-based DV that still runs the majority of Amiga applications.

However, because VLM's accompanying MovieShop software generates all its DVEs in software, special effects can still take quite some time to generate. As a consequence, an expansion slot already awaits a new Dec Alpha-based co-processor which delivers an astonishing 450 mips. The end result, real-time DVEs in software.

Obviously, even a partial RISC solution requires the recompiling of the specific applications that plan to take advantage of it. Nevertheless, the MacroSystems' example does prove that a RISC-based acceleration system, an 060, and the Amiga's existing OS can live in harmony.

Better still, MacroSystems have already offered to license the system to Amiga Technologies, along with the necessary libraries and compilers required to convert software for use with the Dec Alpha.

If Amiga Technologies did adopt the technology as their official high-end Zorro-based upgrade, I'm sure many a developer would be more than willing to support the move and thereby keep the Amiga at the forefront in the race for processing power until a complete RISC solution is in place.

Licensing

Aside from the obvious availability of cash, marketing clout and commitment – courtesy of Escom – one of the most hopeful signs for the future has to be the long-awaited and liberal approach to licensing.

To say Escom are open to licensing is an understatement. The company have already set about incorporating existing Amiga developers into the team – phase 5 being an example – and it appears that this approach will be the norm, with Escom licensing out Amiga technology and also licensing back third-party developments to complement the existing Amiga repertoire.

Obviously, the planned freedom of information doesn't simply apply to traditional Amiga hardware. In fact, a large part will no doubt be in the form of set top box development and assorted spin-off technologies.

In short the message is 'open business.' Anyone with the wants to form partnerships or help expand the Amiga and its technology will be welcomed. At last we may see PC-style proliferation, which in my opinion is the only reason for success of what is without doubt an inferior platform. Another twist is the plan to create encapsulated Amiga environments for both the PC and Mac. In other words, Amigas on a card. And perhaps even more ironic is the plan to port AmigaDos as a optional OS on other platforms. This is more likely to occur with the arrival of a RISC-based OS, at which point the prospect of Workbench on a PC, Mac or SGI could be a reality.

The idea is to permeate the Amiga Environment through to as many platforms as possible and thereby break down the platform dependency that all too often restricts not only the Amiga but all other computing environments.



Don Gilbreath: CEO of VisCorp



Ed Goff: Escom's lawyer

The bottom line

The rebirth of the Amiga has certainly been a well orchestrated affair designed to maximise PR point scoring for both Escom and the newly formed Amiga Technologies.

As it stands, the Escom takeover appears to provide everything the Amiga needs to re-establish, expand and improve. But given the horrendous mismanagement, money grabbing and broken promises of the last year, it's still hard to have much faith in anything anymore.

From what I've seen, however, it's now time to cast the bitterness aside and look forward to true Amiga renaissance. It's obvious Escom aren't in the business of asset stripping as many feared.

I only hope their impressive plans come to fruition sooner rather than later, and the new company lives up to the machine that bears its name.

On the ground

With the centre of Amiga Technologies entrenched firmly in the Netherlands and responsible for worldwide distribution, there's an obvious question of local support within individual countries.

According to Bernard Van Tienen, Escom plan to port their traditional support and distribution methodology to the Amiga. In short, this means centralised distribution with a minimal support base on a local level. In the case of the UK, this will translate into a small UK team of perhaps three people to handle direct Amiga tech support and other local services. This is in marked contrast to the Commodore approach, which at its height boasted around 50 Commodore personnel based in the UK.

However, it must be stressed that the vast majority were concerned with administration and management rather than direct support for the range – a factor which can be verified by anyone who looked for tech support in the old days.



Bernard Van Tienen: traditional support for the Amiga

Although a very different approach, concentration of resources has obviously paid off concerning Escom's aggressive pricing on their PC range, and almost certainly accounts for the massive reduction in the Amiga's new pricing policy.

A major concern of existing Amiga distributors was Escom's huge presence in the high street and the potential it offers to literally out-gun all comers when it came to distribution. Fortunately for the Amiga's traditional box shifting and mail order community, Escom see Amiga distribution as a three-pronged attack.

The plan is to sell the machines through the usual computer retail outlets, brown goods chains, department stores and via mail order. To achieve this, Escom will balance their margins in their own shops in order to leave a suitable margin for the rest. This will implement a scatter gun approach, taking a smaller margin per unit while maximising the spread of distribution and exposure.

Communications conundra

How much are you paying for your phone bill? Ben Vost tries to steer you in the direction of cheaper comms

In these days of global communications, mobile phones, modems, satellites and faxes, our telephone bills become just another everyday expense, seemingly no different to the gas, electric and water bills that pop through our doors with depressing regularity. There is, however, one major difference between your normal utilities and your telephone bill.

With your telephone you have a choice of service provider. Most of the country is now served by a variety of independent telephone service providers, all trying to seduce BT's vast customer base (estimated at around 26,000,000 customers) with offers of better service, cheaper prices and superior support. Your phone will still be connected to BT's exchange for the most part, but the costs for your calls will be charged to you by the alternate provider.

To give you a bit of background, the whole ball started rolling back in 1984 with the Telecoms Act which effectively privatised BT. The relaxation of restrictions on telecommunications resulted in the do-it-yourself phone extension kits and a plethora of third-party telephones which suddenly flooded the market. Until 1990, the only effective competition for BT was Cable & Wireless' Mercury Communications, so in 1991 there was a duopoly review to see what could be done to improve the overall level of competition.

This resulted in BT being restricted to only certain areas of commerce – they were locked out of providing entertainment services over a cable network, for instance. In addition, existing cable companies were given the opportunity to move into communications networks, offering services to existing and new customers through their cable network.

Over the past ten years, BT's prices have been monitored by Oftel, the quango responsible for all these changes to our telecommunications system, and they will be reviewing the state of play in 1998 at the earliest to determine whether the competition is strong enough to sustain BT's proposed entry into the interactive and cable television arena. So what does the future hold? This weekend, Securicor tried to sell its 40 per cent stake in Cellnet, but was denied because it would mean that BT would own the company, so even the mobile communications market is limited for BT. The future might not lie with the cellular phone network, but radio. The DTI have just launched an initiative to look into using the digital FM network in the 2GHz or 10GHz range for digital, wireless communications.

The first part of the next century should see most restrictions removed from BT as the alternative companies grow in strength, and this promises cheaper calls than ever. But in the mean time, what should you do to save cash on your phone bill? Well, there are all the obvious things like not phoning during peak hours and restricting your calls to x amount per day.

What is really needed is a real world comparison of concrete prices, facts and figures on exactly how much your phone bill will be if you spend so long on the phone, etc. All the prices in the tables dotted about the page include VAT, and where individual tables have added features they are detailed within. ➤



BT, the father of British comms companies

BT is the company most in the news for its phenomenal profits (this year's were around £84 per second) and is the outgrowth from the privatisation in 1984. I spoke to Paul Sharma at BT about his thoughts for the next year for BT and he was enthusiastic about ISDN, notwithstanding BT's £400 installation charge and exorbitant quarterly fees for the service.

When asked about the Internet, he replied that he estimated a maximum of 250,000 users in the UK, but added that BT would be offering a residential Internet service in the fourth quarter of this year. I also asked about the upgrade of exchanges to full digital service countrywide as several important areas, including some parts of central London, still do not have call waiting or Caller Line Identification.

He said that BT plans to have either digital or modern electronic exchanges throughout the country by the end of this year. A modern electronic exchange would mean that CLI and call waiting, together with all the other services, would be available, but you would have to change your telephone number.

15 minute call	Peak	OffPeak	Weekend
Local	£59.22	£24.68	£24.68
Up to 35 miles	£123.38	£54.97	£49.35
National	£143.12	£88.83	£49.35

- Installation of a new phone line: £116.33
- Quarterly rental: £24.78

Note that a local call off-peak is the same as a weekend rate. Additional discounts include Option15 (cost £3/quarter, discount 10 per cent) and Premier Line (cost £24/year, discount 15 per cent). In addition, there is a family & friends discount available at no extra charge which lets you nominate five nu bers (inc. one overseas) for an additional five per cen discount.

Mercury, the winged messenger

Mercury is probably the best-known and most successful of the alternative service providers. With their One2One service they are certainly encroaching on the market traditionally held by the likes of Cellnet and Vodafone, especially within the area bounded by the M25.

The split figures in the first column of the table represent the savings to be made if you subscribe to the daytime calling plan. An additional five per cent discount can be achieved through the YourCall system if the number dialled is one of five nominated numbers. There is no charge for this service.

July 1 sees the start of the single national rate at 7.5p per minute for Peak rate and 2.94p per minute at all other times, which is still cheaper than BT's 35 mile rate

YourCall Plus starts at the same date and automatically works out the five numbers you have dialled most and applies the discount to them. All you have to do is nominate what breakdown of national and international numbers you want to use. Mercury gives you the choice between monthly and quarterly billing, splitting your payments into more palatable chunks, and you can also ask for two or three digit 'cost centre codes' which are separated on your phone bill, cutting out any arguments as to who made what call. Mercury also charges by the second, so there are added benefits from not having to time your calls to the minute.

15 minute call	Peak	OffPeak	Weekend
Local	£130.43/£114.56	£43.181	£43.181
Up to 35 miles	£109.28/£103.99	£42.3	£42.3
National	£123.38/£116.33	£70.5	£37.93

- Annual rental: £11.75 (the charge for new users will go up to £23.50 starting the 1 July to coincide with the new services. Existing users can upgrade to the new service for £11.75).
- Daytime Calling Plan: £3.53 per quarter.

Nynex, the American invasion begins

Nynex is an enormous company. With total liabilities and stockholders' equity in excess of $30 billion, they have the financial clout to start a large cable company in the UK, and that is just what they have done. Now one of the three largest cable companies in England, Nynex has been continually expanding their operations to cover about one fifth of the 2.5 million homes and 150,000 businesses covered by its 17 franchise areas so far.



They have been criticised, as have all the cable companies, for digging up the roads, uprooting trees and so on, and they feel so strongly about it, they send out a brochure to anyone who asks explaining how they go about laying their cable, and dig by hand if the trench needs to be dug near trees. Nynex also offers a subscription service called commUNITY which entitles subscribers to unlimited, free, off-peak calls.

CATCH 22

However, before you rush off to join up, there is a catch, or rather a brace of catches. Firstly, commUNITY is only available as part of a package including pay TV channels like Sky Movies Plus, and secondly, it only applies to commUNITY subscribers with the same STD between 7pm and 7am. Still, even with these restrictions, Nynex say that over one million calls have been made through this service, and that number can only increase as Nynex improve their coverage.

Unfortunately, it still means that unless you have a POP with the same STD code as yourself, you're going to have to pay for your dial-ups to the Internet. Nynex's Gemisys 2000 project might see cheaper Internet access rates, however, but Nynex were keeping their cards fairly close to their chest and would only reveal that Internet access was just one of the facets of their new project.

You can also rent a Premium service which includes Call Waiting, three Way Calling, Short Code Dialling, Reminder Call, Call Divert and Call Barring for £5.87 per month, or a subset of these facilities at a range of prices. You join the commUNITY automatically if you subscribe to both Nynex's telephone service and at least one Sky Movie channel or Sky Sports, or the Asian mini pay package. Nynex also offers a further 10 per cent discount to all calls made in the same month once a minimum of £30 worth of calls have been made in a month.

15 minute call	Peak	OffPeak	Weekend
Local	£55.52	£22.91	£22.91
Up to 35 miles	£88.2	£44.06	£41.07
National	£121.61	£70.5	£41.07

- Installation: £25 (additional sockets are charged at £10 for the same floor and £15 for different floors)
- Rental charge: £10 per month

Germany leads the way

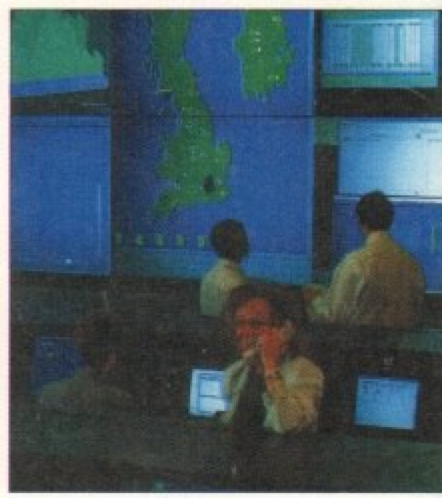
Deutsche Telekom offers ISDN2 installation at roughly £55, with rental rates at about the same as normal telephone services (for two phone lines, obviously). By the end of the year, DT plans to have 2.9 million ISDN channels in place as a first step towards broadband broadcast solutions.

Energis, electrifying communications

Energis is a company most residentia[l] telephone users won't have heard o[f] yet. Concentrating mainly on the business community at the moment Energis is a company wholly owned by the National Grid Company plc, which is, in turn, controlled by the 12 regional electricity companies of England and Wales.

Rather than using underground cable trenches, Energis has taken advantage of their 7000km of overhead power lines to carry the communications cables as well. In central London where there are obviously no pylons Energis is using London Underground's tunnels rather than digging up congested roads.

Energis' telephone network is one of the most advanced in Europe and is the first in the world to be based on Synchronous Digital Hierarchy (SDH). This could be the first step towards



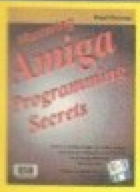
The Energis control centre

broadband broadcasting over a telecommunications network in this country. Energis provides business users with comprehensive telecoms management reports every month which detail not only calls made, but also how fast your switchboard answered incoming calls and when the busiest periods of the day are for telephone use in your company. The total amount of information generated by these reports covers three A4 pages.

Energis told me that although they have the ideal sales outlet for telephone service in the regional electricity showrooms, they weren't planning on jumping straight in feet first. They also had no firm plans regarding Internet provision, either for business customers or residential.

Emerald Creative Technology

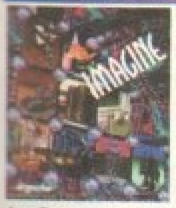
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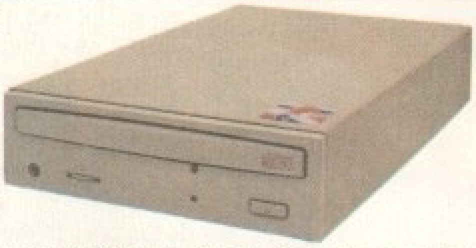
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The 'net is 'in.' Everyone is doing it, talking about it and writing about it. To the alarm of the boffins who class themselves as the founders of Cyberspace, it is becoming more and more accessible to the average person on the street. And now, a new trend is catching on from the major cities to country towns, a trend that takes the usually solo pastime of computing and turns it into a sociable experience.

'CyberBars' or 'CyberCafés' as they're known, provide Internet access for those without the necessary facilities or for those who want to turn surfing the 'net into a social event. Help is at hand for the newbies, and the experts can chat away about the best sites to peruse.

We take a look at a couple of options available which, although they share the same concept, are as different as chalk and cheese.

Café culture

The latest way to enjoy the Internet is at one of the new CyberBars where you can surf the Web over a Cappuccino. Tina Hackett meets the café society of the future

Surf in the city

Dry 201, Manchester

Situated in Manchester's busy city centre is the Dry 201. A thriving night-spot frequented by the young and fashionable, only the trendiest lagers are on tap and loud pop music blares out from the speakers.

It's the city's first CyberBar and behind the project is Granada TV presenter Anthony H Wilson, whose other ventures include Factory Records and the Hacienda nightclub, and Company Production Manager, John Drape. Wilson explains the inspiration behind it: "We were looking at multimedia development in Manchester and pondering what we could do with it. We explored a few ideas with the Hacienda and then saw what they were doing with Cyberia in London. We realised it would be perfect for Dry Bar."



"Dry Bar has never had pinball machines, fruit machines or computer games," Drape adds "It's a great addition and in keeping with the bar's ethics."

They liken it to providing newspapers in bars. "It's *today*" offers Wilson, "It's about enthusiasm and that is exactly what life is about."

Looking around the bar, any preconceived ideas of the Internet and the anorak are soon dispelled. "It's a much more open culture than we think and there is a good cross-section of interests" confirms Drape. "It's a social experience and we've tried to make the CyberBar element blend with the rest of it ."

This also goes some way to explaining why the computer area is designed like it is. There is plenty of room around the machines and although there are only two PCs at the moment, three chairs are available around each which provides a greater opportunity to interact with the other customers. They have gone for a deliberate contrast to how Cyberia have approached it, where they have the computers in a line with a chair at each, which Drape and Wilson believe is too formal. "There are no books on how to build a CyberBar. We've done it the way we think is right" concedes Drape. Although the



Amidst the hubbub of Manchester life you can find Dry 201, where you can pop in for a beer and a surf in CyberSpace



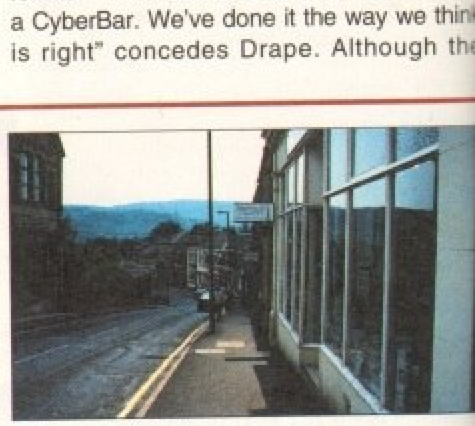
Anthony Wilson, partner of Dry 201, explains the inspiration behind the bar

Peak practise

The Peak Art CyberCafé, New Mills

Situated in the beautiful Derbyshire countryside is the sleepy town of New Mills. Hardly renowned as a centre of new technology, it's surprisingly forward thinking as far as the Internet goes. Walking along the main street, you come across the Peak Art CyberCafé, and those unfamiliar with the trend would be forgiven for thinking this was simply a rather cosy-looking coffee shop. But take a closer look and you'll see that there's more than just scones and jam on the menu. The Peak Art CyberCafé, although not that far from the Dry Bar geographically, is a million miles away in culture.

Towards the back of the cafe, you'll find two computers all connected to the 'net, and for a nominal fee you can surf away to your heart's content. Alternatively, those unaccustomed with the technology can enrol for a course of tuition. Brazilian music is heard in the background and there is a distinctly relaxed atmosphere.



The unlikely setting of New Mills – home to the North's first CyberCafe

The Peak Art CyberCafé is the brainchild of proprietors, John Scott and Eleanor Chronnell and technical adviser, Damian Lewis. Only seven weeks into its opening, it's already popular with the local population and with those sight-seeing through the picturesque town.

New Mills may seem like quite a strange choice for a CyberCafé but as Lewis is keen to point out: "There are a large group of people who work from home so it's handy for them, and you'll find there are quite a lot of technology-minded people who live here

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CyberBar section (incidentally called Wet bar – a cross between Web and Net!) has only been open six weeks, it's already proving very popular. Drape continues: "It started off fairly slowly at first as there was some phobia surrounding it, but now we're very busy – there were even queues on Friday." And what do all these people do on the net? "Well it's Manchester, so football is very popular. Football and Music."

PREVALENT

For those with more serious purposes in mind, studying via the 'net is also a prevalent use. Staff are on hand to provide help and advice. "We've been fairly laid back about how we train the bar staff. We've not sat them down and said do that this way. We've let them explore for themselves because a lot is self-teaching. We will base our training sessions like this too."

Despite the Net becoming a much more

> It's a social experience and we've tried to make the CyberBar element blend with the rest of it
>
> John Drape



The lively atmosphere of Dry 201 – the CyberBar element is in keeping with the bar's ethics

glamorous pastime, it still attracts only a small number of women, but with the introduction of CyberBars it looks likely that far more women will become interested. Drape explains their policy: "It's difficult. Cyberia have been holding Women-only classes but that's just 'right-on' feminism. I don't think this will encourage women – it's patronising. Likewise we wouldn't charge £2.50 for a lad and £2 for a girl. You have to be sensitive on how you do this."

Inevitably, with all the hype surrounding cyberspace there is also a lot of speculation over its future. Wilson sees the Internet as being the new mail order: "People won't be downloading music. They'll be listening to a CD, decide they want it, order it and it'll arrive the next morning. That will be the revolution."

As to the future of CyberBars, Drape hopes to see more of them: "There's a generation who have missed out on the computer. Information Technology is a key thing and this generation must be encouraged to pick it up quickly – hopefully through bars like this."

Money matters

Cruising the net at Dry Bar will cost you £2.50 per half hour, while Peak Art has three different price bands. Prices vary from £3 for the first ten minutes and 14 pence thereafter, with the concessionary rate of 10 pence for unwaged adults, OAPs, students, minors and small business owners in the first six months of trading. But corporate customers can expect to pay £5 for the first 10 minutes and 25 pence per minute thereafter.

and work in Stoke, Sheffield and Manchester. You get lots of scientists, architects and students. We also believe that people in cities already have computers and are bored with the technology."

As well as the CyberCafé side, it also offers a showcase for local artists. A variety of paintings cover the walls for customers to buy, but a much wider audience is hoped to be reached via the Internet.

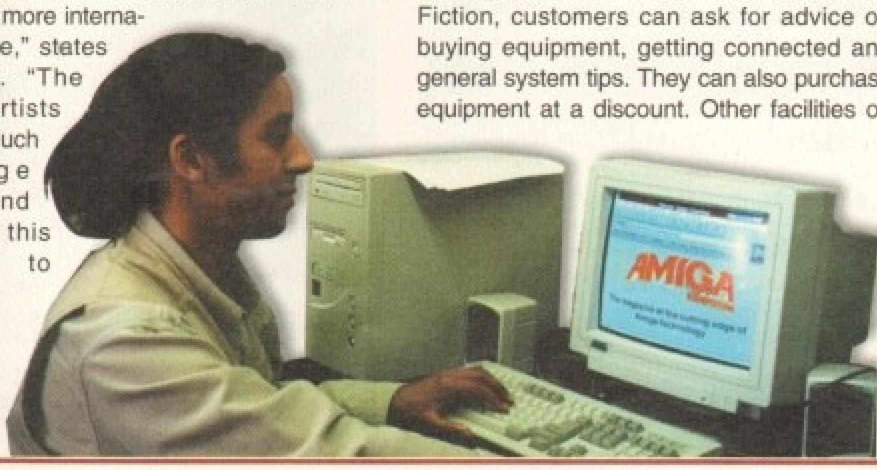
Chronnell, Scott and Lewis hope to set up a Virtual Gallery where potential buyers can take a look at their 'gallery', browse the work on screen and hopefully then buy. "We're going for a more international angle," states Chronnell. "The English artists don't get much coverage abroad and hopefully this will help to change things." Through WebSpace they plan to have a 3D, walk-in gallery where the buyer can see everything in 3D in a more realistic fashion.

Lewis is eager to stress the advantages of coming to a CyberCafé: "It's very much a social thing at the moment. We're getting a wide range of people in, from the school kids to the academics. We see it as taking the local community out into the global community." They have also set up links with the local schools.

Apart from popping in to browse such popular sights as the X-Files, Nirvana and Pulp Fiction, customers can ask for advice on buying equipment, getting connected and general system tips. They can also purchase equipment at a discount. Other facilities on offer are the use of business tools/graphics, games and Fax.

The Peak Art CyberCafé wish to sell local artwork globally via WebSpace





Damian Lewis, the café's technical adviser, believes CyberCafés will survive on their own merits

New Mills is a popular tourist spot and as the tourist season hots up, sightseers will not be looking in the local A-Z for information, but on the computer, and Peak Art will provide the facilities for them to do this.

As most trends tend to disappear as quickly as they have appeared some may be sceptical about the future of a CyberCafé, but Lewis has a positive outlook: "They may be a fad now, but they will survive on their own merits. It's our hope to have ten machines on site and a server for the high peak district to give locals more Internet access."

"It's also our ambition to sell art worldwide on the 'net and become the biggest art exhibitor in the world!" Chronnell concludes.

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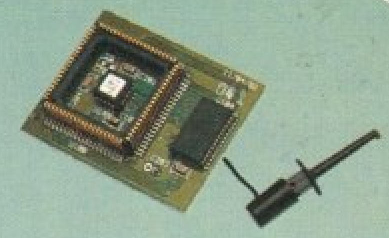
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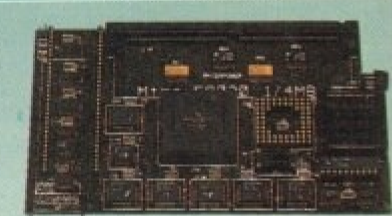
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2.04 ROM or above, Minimum 1MB
Recommended 2MB or above
*Only available on Colour PowerScanner 4

POWERSCAN 4 B/W £99
POWERSCAN 4 COLOUR . . . £199
OCR (when purchased with scanner) . . . £20
OCR SOFTWARE £49
POWERSCAN 4 S/W ONLY £20
PC INTERFACE + COLOUR S/W £49
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AGA FLICKERFIXER

NEW



AGA FLICKER FIXER

ScanDoubler II is a full 24-bit AGA Flicker Fixer for the Amiga 4000. It automatically de-interlaces all AGA screen modes and scan-doubles non-interlaced PAL/NTSC modes to allow VGA monitors to display them. Supports VGA only, S-VGA and multiscan monitors. Pixel sharp picture, even at 800 horizontal resolution and has a standard 15 pin VGA type connector. Comes with composite video/S-VHS outputs.

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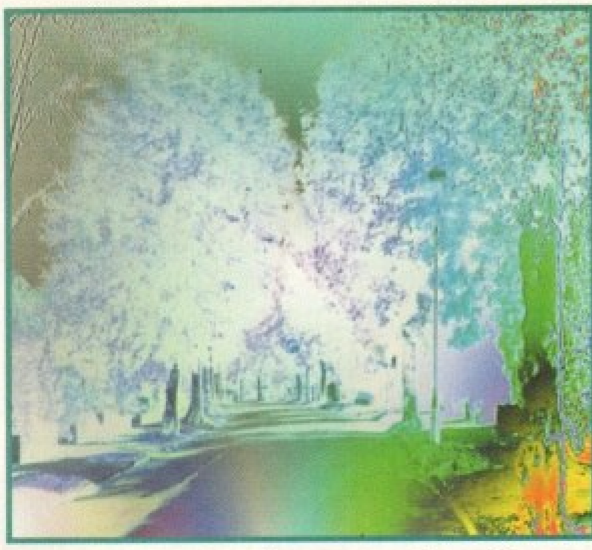
Trade and Educational orders welcome - Worldwide distribution available

Since the initial launch of Almathera's artistic masterpiece, there's already been one revision to Photogenics with the release of version 1.1. However, I think even its authors will agree this update was more or less a fine tuning exercise.

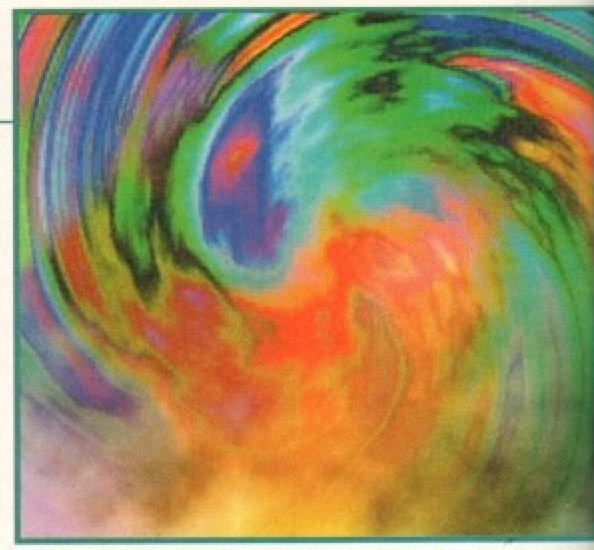
Now, Almathera have hit the update trail once more, but this time we're talking about a major revision, rather than just minor tinkering. On the face of it there's little obvious change, but when you explore the mechanics of the software there are a whole host of improvements.

On the display front there are two major enhancements, the first being the arrival of true 24-bit painting via the new Cybergraphics retargetable graphics standard. As you'd expect, this only applies to people with RTG boards such as the Picasso II, Domino, GVP's Spectrum, Retina Z3, Picolo and CyberVision64.

However, the problem is that I can't confirm the program's new found 24-bit performance because the necessary Cyber



A classic combination of image processing and the power of graduated transitions. Emboss, false colour, negative and more, all blended into a single image



A combination of the new warp option plus two of the program's very own in-built image creating loaders

Targeting



More brand new loaders and savers, plus grad trans and the much-improved crop option

graphics drivers aren't commercially available as yet, although they should be shipping from Almathera by the time you read this article.

As you may know, there is a limited shareware version of the CyberGraphics system already available, but alas this doesn't support the higher resolutions that many RTG owners will demand from their systems. However, for the vast majority, a far more important graphics improvement is the arrival of a dithered 256 colour mode which will offer huge appeal to both AGA and RTG owners alike.

END RESULTS

Admittedly, the aforementioned dithering is a relatively simply ordered variety, but nevertheless, the end result offers a massive advance on its predecessor, and indeed the existing Ham8 alternative.

Thanks to the dithering there's no unpleasant, and sometimes misleading, fringing or stepping within gradients. And unlike the Ham8 preview option, the image is razor sharp, thereby providing a much more accurate impression of the 24-bit data it portrays.

Another big plus on the display department is an addition to the pull-downs which initiates system redraw routines, which when used in conjunction with an RTG offers a big improvement on the program's already impressive screen update.



With a little effort Photogenics can produce reasonable results, but it must be said that font handling, in general, could still do with some improvement

Add to that another new option which enables you to assign your preferred saver to the F10 key and you have a combination of new features which really enhance the program's graphic performance, irrespective of the new Cybergraphic support.

A good example of this is the ability to assign the F10 option in conjunction with an RTG board to produce a near instant 24-bit hotkey preview of your project.

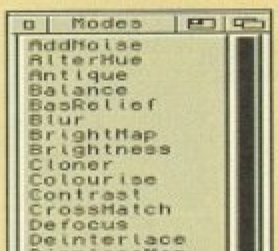
On the paint application front the good news keeps coming with the arrival of a new trans grad feature which translates into graduated transparencies. As a result, you're free to apply paint using a variety of cross-fades such as top to bottom, left to

Value added art

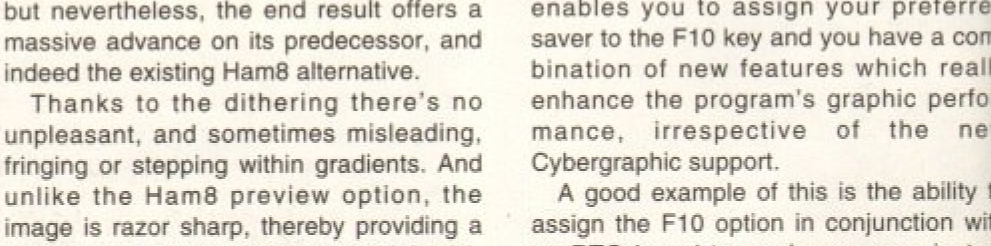
With the massive array of features and new add-ons to the package, Almathera could quite easily quadruple the price of Photogenics and still have a strong case for a value for money award. Needless to say, that's not the case. As a result, I feel the company deserves a spine-snapping slap on the back for their approach to Mr/Mrs Average and the part both parties will need to play in reviving the long-suffering Amiga market.

Not only can you get the complete package for less than £60, but any existing users can upgrade for a paltry £15. All you have to do is return your existing manual and you'll receive Photogenics1.2 plus a much improved 150-page replacement manual.

In a world of shameless profiteering and software piracy, this is a major show of good faith for the Amiga community. I only hope Almathera's trust is justified. In other words, anyone who pirates this software deserves a slow and lingering death!



With a massive arsenal of 59 assorted paint and image processing modes, there's no compromise when it comes to creating power



Soft-edged drop shadow, a familiar commercial favourite knocked up in a couple of minutes

Back to basics

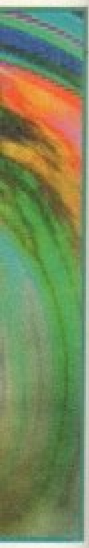
For anyone unfamiliar with Photogenics all this talk of user-programmable image processing options, painting modes, and transparency gradients may well be a tad confusing. Basically, it all boils down to the way in which Photogenics actually works at a system level. Unlike every other Amiga paint package, Photogenics does not perceive any difference between paint in the traditional sense and image processing effects.

As a result, it's just as easy to spray on a negative, pixelise or colourise as it is to apply normal paint. The same applies to all the painting tools. For example, a filled rectangle drawn onto an image in BasRelief will produce a weird negative effect applied specifically to the selected area.

Another massively appealing aspect of the Photogenics' approach is that even though a tool has been applied, the actual style of effect or paint applied isn't necessarily a permanent feature. For example, you can spray on any effect you want and then click on all the available modes in turn, at which point the brush strokes will automatically update the image with the new effect. And of course, if you're unhappy with the strokes themselves, you're still free to undo the entire thing and start from scratch.



The program's powerful alpha channel support put through its paces. Thanks to the drag and drop approach, compositing images couldn't be simpler



g true colour

Paul Austin oversees the evolution of Almathera's ground-breaking paint and image processing system



right, density-filled rectangles and so on. Better still the effect can be applied either over the entire image or via any one of the existing fill tools, such as circles, ellipses, rectangular shapes and so on.

However, and perhaps best of all, the new feature adopts Photogenics' unique ability to apply effects or brush strokes as an image processing function. As a result, you can use any one of the huge number of IP options to affect the image. Therefore, if an IP effect is selected the gradient will produce a smooth cross fade from the existing image to that of the chosen IP option – negative, pixelised, false colour or whatever...

In addition, you can also use the feature with effects like Rub-thru to produce a basic alpha fade between the primary and secondary images. Aside from extra pull-down options, the toolbar also boasts a new arrival in the form of the Warper. In addition to offering the fairly self explanatory ability to deform, or more accurately stretch, pinch or bulge the image, you're also given the chance to twirl.

Like all other toolbar options, and indeed the vast majority of painting modes, a separate control requester is available for fine tuning and combining the warping options. As you can see, the end results are pretty impressive. Another major addition is the long-awaited arrival of a visual cropping system. In previous releases, the lack of an interactive ADPro-style crop option was a major omission. Fortunately, this has now been resolved with a fully WYSIWYG adjustable box and an associated numerical requester – which of course allows user input if absolute precision is necessary.

Aside from the obvious improvements on the paint and image processing front, the new release also boasts an impressive collection of new loaders and savers, notables including Tiff, PCX, Ham6, Retina and ProGrab. AC

Any questions

Given the overall price to performance ratio, any complaint inevitably smacks of nit-picking – however, there's still the odd point that needs some attention.

Perhaps the most obvious idiosyncrasy of 1.2 relates to a rather curious aspect problem when running on a none Cybergraphic Picasso screen. Unfortunately, whenever a new image is loaded its preview almost inevitably defaults to double its actual height.

Obviously, the solution is to simply manually resize the image to roughly the correct aspect. However, I must admit it is annoying and, worst still, whenever you hide and then re-show the image it defaults back to the wrong aspect once more.

The only other element I feel still needs some attention is the program's font handling. It's true that the new found support for CompuGraphic fonts does offer a big improvement over the bitmap-only approach seen in previous versions. However, the actual quality of the rendered text is still poor, regardless of the type of font used to create it. Unless you're willing to go through a fairly lengthy scaling procedure, the jaggies created on most fonts render them unusable for projects that demand a quality look.

The only solution is to generate text roughly four times larger than you actually require and then apply smooth scaling to produce an anti-aliased string of text of the appropriate size. Obviously creating strings of text in 300 or 400 point, and scaling as required, does take time, and worst still could stretch the available RAM on smaller systems.

As you can see, reasonable results are possible, but it does seem a shame that this otherwise faultless package can't easily produce the text quality that most people consider a pre-requisite for commercial paint packages.

The final analysis

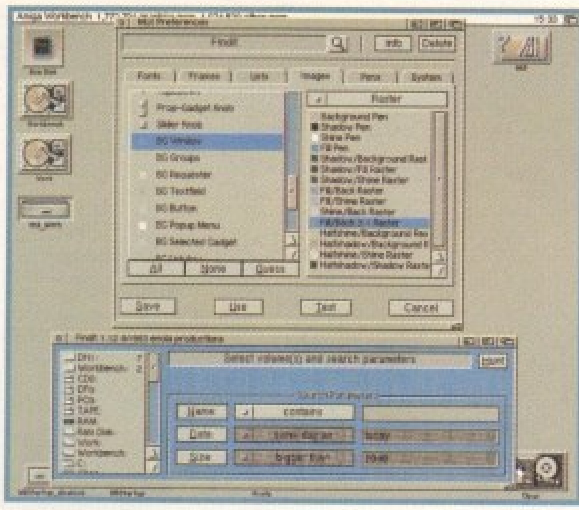
At the risk of being predictable, Photogenics 1.2 is in general a stunning update to a package widely acclaimed as the ultimate combination of price and performance when it comes to Amiga art.

If you don't necessarily want animation it stands head and shoulders above any other Amiga painting environment, the only exception being the awesome TVPaint 3.0, which works out roughly 13 times more expensive than Almathera's latest creation.

The bottom line

Product: Photogenics 1.2
Supplier Almathera Ltd
Tel: 0181-687 0040
Price: £59.95

Ease of use	**9**
Implementation	**8**
Value for money	**10**
Overall	**10**



Open both MUI Prefs and FindIt and position them so you can see both clearly



The drab and plain background of the FindIt window can be changed via the Image menu in MUI Prefs

MUI magic

Magic User Interface brings a much needed facelift to Amiga applications. Darren Evans checks out some of the features of this great program which was given away free with the June issue of Amiga Computing

Graphical user interfaces (GUIs), cycle gadgets, radio buttons, pop-up menus. These are just a few of the techie terms which exist in every Amiga programmer's vocabulary.

Together they describe the many graphical objects which are the backbone behind the reason why Workbench and nearly all Amiga applications look the way they do.

Even as a beginner, most Amiga owners soon find themselves working with menus, windows, buttons and other exotic screen elements which make navigating your way through programs so easy and intuitive. In the dark days of computing, nearly all computers had you typing in cryptic and difficult to remember commands in order to find your way around.

Some of you may well remember the days when a menu used to be a numbered list displayed on screen from which you pressed the appropriate number key to choose the menu item. Don't get me wrong, command entry at the keyboard is still an important and powerful method of communicating with your Amiga, that's why even the latest Workbench versions still contain the good old command line interface (CLI) utility.

EASY LIFE

But for sheer visual elegance, ease of use and general friendliness, life would be unbearable without GUIs. However, a problem exists in that many of the tools used in creating GUIs for the Amiga are very inflexible and use built-in fonts and static window sizes which cannot adapt to the higher resolutions attainable nowadays.

MUI solves these shortcomings by providing tools and libraries which give the Amiga programmer a highly versatile and resolution-independent graphic interface system. The really neat thing about MUI applications, however, is that the user of the application can change the look and feel of the application's GUI to suit their personal preferences as well as their screen modes.

These changes are made using the MUI Prefs utility which lets you change practically every graphic element that comprises a GUI. Don't worry though, there are no programming skills required, just simple selections and alterations. For example, you can choose which fonts are to be used, you can alter the thickness of borders, change the way scroll-bars look and how much space should be inserted between the lines of a list view, and much, much more.

So, let's take a quick look at just how cool MUI is with a short tutorial. We will be using a MUI program called FindIt for the examples, so make sure you have already extracted the program from our CoverDisk – you will find it in the MUI-Apps drawer. For details on extracting the program, see the CoverDisk pages in this month's issue. FindIt is a file finding program which helps you track down a file's location quickly.

Of course, you will also need to have MUI actually installed on your Amiga, so if you didn't buy a copy of the July issue (why not?) see the back issues page for details on how to order. If you did buy the July issue then you're probably using MUI right now and know just how good it is. If you haven't already installed it, do it now – you don't know what you're missing.

By the way, something which wasn't mentioned about MUI in the July disk pages is that there are a few MUI presets already set up and available from the MUI Prefs menu bar. Simply choose Presets from the Edit menu and select any of the three choices waiting for you there. The two XEN presets are particularly good.

Changing the way your MUI programs look and feel is done via the MUI Prefs editor, which you should find in the drawer created when you installed MUI, and there are two ways to make changes – globally or application specific.

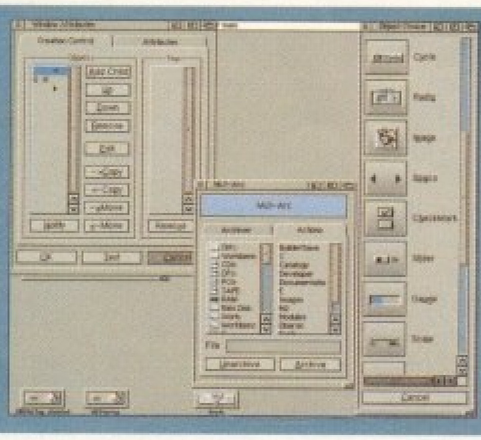
Any changes made globally will be apparent in all MUI applications executed after the changes are saved. Application specific means that any changes made will only be apparent in the chosen application. Choosing between global or application specific change modes is done via a pop-up menu located at the top of the MUI Prefs screen, which defaults to global mode. To choose a specific ➤

Building block

For all you programmer types out their who are keen to produce your own MUI programs, you will be glad to hear that MUIBuilder is available.

MUIBuilder is a tool for creating user interfaces. It's very easy to use and very powerful, and can produce source code for many popular programming languages such as C and Modula 2.

MUIBuilder is one tool all budding MUI coders shouldn't be without. It's available from all good PD libraries who stock the Aminet CD-ROMs or, if you have access to the Internet, you can find MUIBuilder and many more MUI related programs and files on the ftp site at ftp://src.doc.ic.ac.uk/aminet.



MUIBuilder makes creating user interfaces incredibly easy and can produce source code for many of the popular programming languages

application, simply click on the magnifying glass to the right of the application display box and a pop-up list will appear showing the names of any MUI programs which have been detected. MUI automatically keeps track of previously loaded MUI programs and adds them to this list. Clever or what?

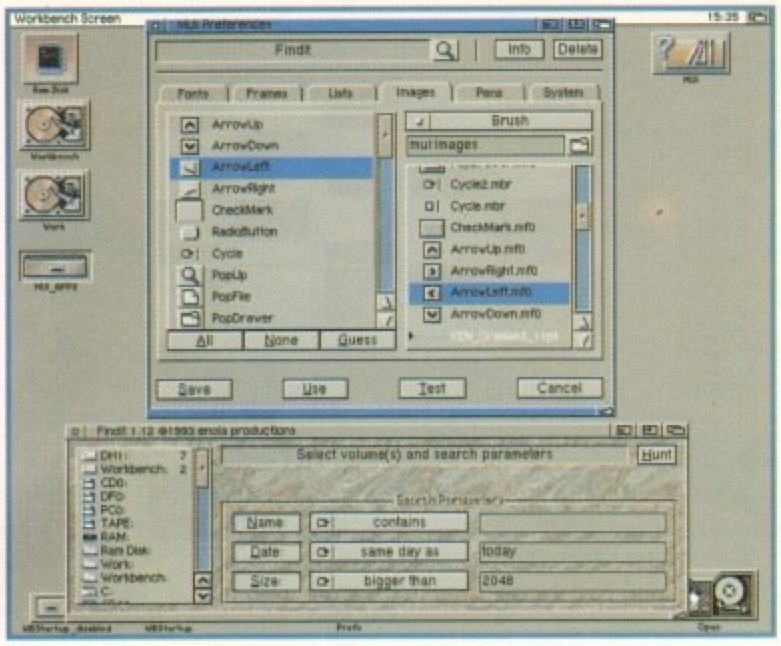
So, armed with the knowledge that you can make global changes and application specific changes, you can start to customise your MUI setups.

You will notice that just below the MUI application pop-up bar is a row of six tabs. These are the various menus which contain all the different aspects of MUI interfaces you can edit. The first of these, Fonts, allows you to choose which fonts are to be used for such things as lists, title bars and other text objects within MUI interfaces.

Frames is particularly good as it allows you to change the way buttons and text boxes are displayed. Here you can give buttons and text fields a smart 3D look.

Lists are boxes which have those dinky slider bars and buttons that allow you to merrily scroll your way around the list contents. Here, you can change such things as the amount of space between list items, whether the list contents scroll pixel by pixel in an ultra smooth manner, or whether they scroll a character at a time, which looks more jerky. You can also change the position of the slider buttons, among other things.

The Images menu allows you to change many things including the way scroll arrows, radio buttons and slider knobs look. In fact, a MUI programmer doesn't specify any image data regarding how such objects should look, he simply says, 'this is a slider button so show whatever image is assigned to this slider button here please.' It is then your choice as to what image is used for the slider.



Changing buttons and sliders is easy. Here, the scrollbar and cycle gadgets are getting a makeover

Other cool changes can be made such as having an image as the backdrop for the background colour of a pop-up menu or list. I currently have my pop-up menus appear with a dark marble texture image which is much better than a boring white background.

COLOURFUL

The Pens menu specifies what colours are used when drawing user interfaces. For instance, you will probably agree that the default MUI 'look' is almost of a brushed metal design. This is because the pen colours are specially designed to give this effect. You could, for example, change the colours to give a more gold metal look to the interface by using various yellows and light browns. A little experimentation is needed but you soon get the hang of it, and the changes can be quite dramatic.

System lets you change such things as how the Amiga re-draws the user interface in the event of, say, re-sizing a window, allows you to specify what public screen to use, and also what keys to assign to keyboard shortcuts for user interface commands.

Remember, any changes made in these menus does not take effect until you either save the changes or click on the Test button. Saving the changes immediately quits MUI Prefs, saving all information to a configuration file.

If you just want to test how the changes will affect the user interface without making them permanent, you can click on the Test button. This will immediately re-draw all MUI user interfaces which happen to be active at the time (including MUI Prefs interface) if in global mode.

If you are changing only a specific application, the application should be memory resident at the time or you will get the message 'Application (whatever) is not running.' If, however, the relevant program is running, its interface will be brought to the front of any obscuring windows with the updated changes temporarily in effect. If you like what you see, you must then click on Save to make the changes permanent. You will probably use the test button quite often to fine tune your changes until you get them just how you want them.

So let's see how easy it is to tailor the way your MUI programs will look. It's all very painless and you don't need to be a techie. You will need to run the FindIt program first and then run the MUI Prefs program. Once both are up and running,

MUI programs

There are some great MUI programs available now, with more and more appearing all the time – here are just a few of them. We also included some MUI programs along with MUI itself on the July CoverDisks, so if you missed out check the back issues page.

BlitzBlanker – this brilliant screen blanking utility is packed to the gills with features and has 40 screen saver modules. All modules are configurable and most of them are fully compatible with many of the most popular graphics cards.

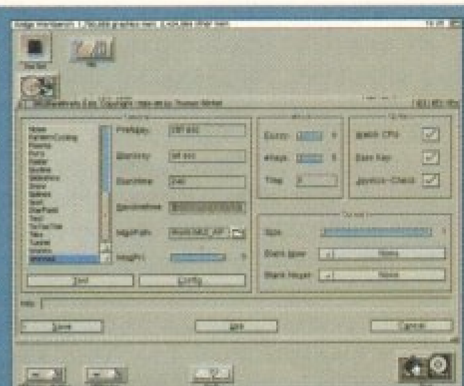
ReKeyIt – do you want to change those standard keyboard shortcuts for the Workbench menus to your own personal preference? Well ReKeyIt allows you to do just that

MUI-Menu – when you have lots of programs you regularly run on your hard disk, it can be a pain to have to search out the executable icon and run it. Sure, you can leave out the icon on the Workbench, but things can get a little cluttered on systems without the benefit of high resolution monitors.

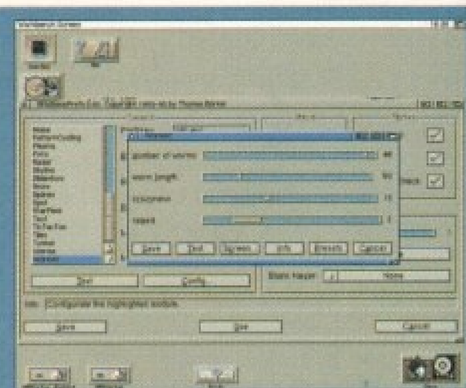
MUI-Menu solves the problem by allowing you to create a list of your favourite programs which are assigned to a button. Each button is also given a keyboard shortcut so you can run them by simply pressing a key.

Ro – want a file manager program to keep your files and directories in order? Ro may just be what you're looking for. Similar in design to Directory Opus, but with the much more efficient and versatile MUI interface system.

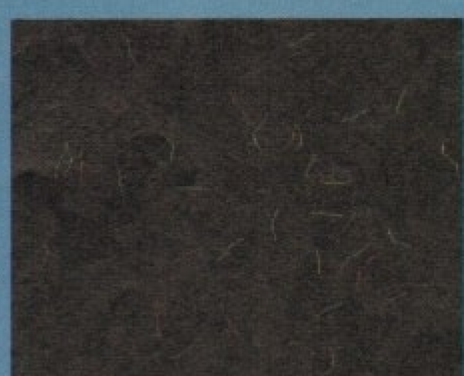
BackMan – as a hard drive owner, you probably already own a disk backup utility. BackMan is a feature-packed MUI version which will help keep your hard disk and its contents safe and sound.



BlitzBlanker is a versatile screensaver utility and has masses of screensaver modules to choose from



All of BlitzBlanker's screensaver modules are configurable, allowing you to change various parameters which affect how they operate



This particular BlitzBlank module features a multitude of coloured and animated worms which wriggle their way around the screen



ReKeyIt allows you to change the standard Amiga Workbench keyboard shortcuts to your own personal preference

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FindIt pro-
Prefs pro-
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reposition or re-size the windows so you can see both clearly.

As you can see, the FindIt window consists of a list on the left showing all the devices and volume names. Three cycle menu buttons allow you to define the search parameters and a single button marked Hunt activates the search. All these gadgets are drawn by MUI and, unlike standard Amiga GUIs, they are totally resolution independent.

To see this, re-size the window so it completely fills the screen. You will now see that MUI recalculates all the buttons' and lists' positions so they fit to the screen. This is great news for everyone as you can totally arrange your user interfaces to take advantage of high resolutions.

MAGNIFICATION

Re-Size it back to normal so you can see the MUI Prefs window and let's do something about the rather drab colour of the FindIt window background. First of all, let's make sure we only make this change affect the FindIt program. At the top of the MUI Prefs window, click on the magnifying glass icon to bring up a list of currently recognised MUI programs. From this list, select FindIt by double-clicking on it. Now, any changes made with MUI Prefs will only show up in the FindIt user interface.

We will use an image from the FindIt window background and to do this we need to go to the Images menu. Click on the tab marked Images and you should now see the various controls for the Image menu. Move the mouse pointer to the scroll bar on the left and drag it down until you find the entry 'BG Window'. This entry shows what the currently assigned image is for the FindIt window background. Select this entry by clicking on it with the mouse. Now we have the entry selected for change, we need to choose a colour from the Raster selection under the cycle gadget. Find a colour you like and double-click on it. You should see that the BG Window entry in the other list window has changed to your selection.

To test how this looks in the FindIt window, click on the Test button and the colour will be assigned and displayed. If it doesn't look right, simply choose another colour and click on Test again. When you find one you like, you will have to click on the Save button to make it permanent but remember, do all your other changes first because clicking on save will also quit MUI Prefs.

Things are even better for owners of Workbench 3.0 or above. With the Tooltypes feature in version 3.0, it's possible to use actual pictures for backgrounds. You could then draw your own backgrounds and use those instead of merely changing the colour.

Well, that's the background taken care of, let's see what else we can do to spruce up the FindIt interface. Those cycle gadgets to the right of the Name, Date and Size buttons could do with a makeover.

As mentioned earlier, MUI programmers don't specify how gadgets will look, they simply give information on where and what type of gadget should be at a particular position in the interface. The image for the gadget can be changed by the user.

While we are still in the Images menu, move the mouse to the scrollbar for the right list view and move it all the way to the top. You are looking for the current image for cycle gadgets, which is appropriately titled Cycle. Highlight the entry and you will find that the list view on the right will change to show which image is currently active. You should also notice that the cycle gadget above the right-hand list view has also changed to Brush.

ENTRY FORMAT

All the entries in the window are in standard ILBM brush format which means you can create your own with an art program. As you scroll through the right-hand list view, you will also notice that some entries are printed in white text and have a small triangle to the left of them. These signify brush groups and clicking on the triangle will open up the group and display the various brushes within it.

Let's change the current cycle gadget brush to a better one. My favourite collection of brushes is found in the WD_New_11pt group. Move the scroll bar until you find this group and click on the triangle to open it.

Locate the cycle gadget brush under this group and double-click it. You should see the cycle gadget brush in the left list view changes to the new one. Clicking on the Test button will allow you to see how this new brush looks in the FindIt window. If it's not to your taste, you can browse through the other brush groups to familiarise yourself with the brushes currently on offer.

While you're there, you can even change the way the scroll bar arrows look. One thing to remember is that when you select a new brush to change in the left list view, the right list view will automatically change to display the group within which the currently assigned brush can be found, so you will have to constantly re-locate the group with the brushes you want to use every time you select one you want to change.

The MUI Prefs utility has many more features to make your MUI interfaces look ultra-cool, so experiment a little. Take a look at the MUI AmigaGuide file in your MUI drawer too. This has more detailed information on all the features available.

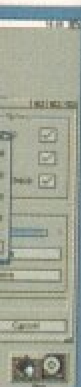
We will also be sure to keep track of the latest and greatest MUI programs and will put them on our CoverDisks when possible.

Program change

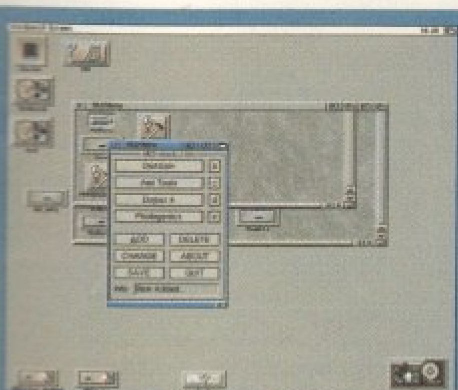
This ability to change the look and feel of Amiga applications requires that the application uses the MUI libraries. There will be no changes whatsoever to standard Amiga programs.

There are hundreds of MUI programs available with more and more appearing every day, such is the popularity of MUI. In fact, you will find a comprehensive list of MUI-specific applications as a text file on this month's CoverDisk in the MUI_Apps drawer cleverly titled MUIProgList, which was compiled by our very own Ben Vost from the Aminet index file. Simply load it into your favourite text editor/browser or print it out.

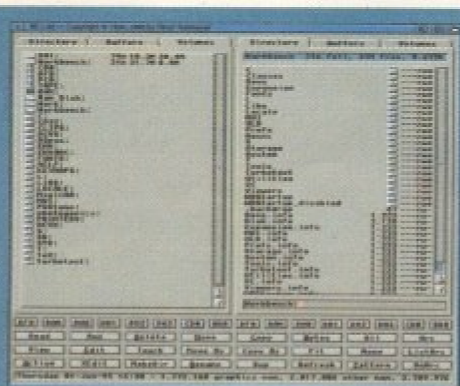
If you are looking for the latest MUI applications, Aminet is probably the best place to look. Those of you with a modem and access to the Internet can check out the Aminet FTP site at address ftp://src.doc.ic.ac.uk/aminet. If you don't own a modem, you can get hold of the latest Aminet CD-ROMs available from most good PD libraries.



...les are
...various
...erate



MuiMenu lets you create a menu list of your favourite and frequently used programs for quick and easy access



Ro is a really cool looking file manager to help make manipulating your files and directories a breeze



...dard
...to



BackMan is an essential utility for hard disk owners with lots of features



BackMan has many options, making for a powerful and versatile program which is also easy to use

Image is

ImageFX has been around for a while now. People have previously regarded it as a poor cousin to AdPro, it's added painting features too slow to be usable, it's morphing package not really being up to scratch. Oh no, if it's image processing you want, you'll need AdPro, Morph Plus and ProControl. And a 24-bit paint package. And a graphics card to take advantage of the paint package. And lots of cash.

Maybe you really ought to look at ImageFX. It's really good, honest, and now that ASDG (now known as knicker elastic, or something similar) have been lured by the bright lights of the PC, Mac and SGI worlds, it's really the only alternative apart from the still flaky ImageMaster.



That's not to say it isn't any good. I hardly ever use AdPro any more. ImageFX has certainly shot into the lead and no mistake. Anybody who has been lucky enough to have been able to get their hands on a Cybervision graphics card, or has registered the CyberGraphics software for their graphics card, should be especially pleased now that ImageFX supports the new 15, 16 and 24-bit intuition screens created by Cybergraphics. That's right, you can now have a high resolution 24-bit Workbench which ImageFX will take advantage of.

Since I currently only have the unregistered version of the Cybergraphics software, I can only tell you about running ImageFX on a 640x480 16-bit screen, but even with these restrictions, ImageFX runs like a track star. Unfortunately, you still don't get the full benefit, because ImageFX only gives you a preview until you let go of the mouse and let it redraw the screen with the changes you've made.

This is still a vast improvement over the old 16 colour dithered preview and saves you from having to perform numerous undo and redo operations to get your operation right.

Still on the subject of graphics cards, versions of ImageFX prior to 2 were a bit of a pain because of the overlaid screen method ImageFX used. Version 2 added the ability to use ImageFX on a Workbench screen with a preview window in addition to the normal toolbar. This, of course, meant that if you wanted to get the best quality out of the preview you would have to run your Workbench in as many colours as possible – 16 or 256 for AGA or RTG machines.

Nova Design have taken the next logical step with v2.1 by adding the ability to open a public screen for ImageFX to use, thereby freeing Workbench from having to run in an undesirable number of colours.

IFX now also supports more filetypes for loading and saving than AdPro – even with the Professional Conversion Pack – including some really obscure ones like FITS, and still supports GIF loading and saving, notwithstanding the Compuserve/Unisys conflict over licensing fees. More importantly, ImageFX now comes with a much better batch processing tool, called AutoFX, allowing you to manipulate sequences of images to create animations in Mpeg or ANIM format.

ImageFX's manual is a vast improvement over the AdPro one too. It contains numerous examples, illustrations and tutorials, although the quality of the images does leave a little to be desired. Perhaps the next purchase Nova Design should make ought to be a better quality printer.

My only real concern is that, like most manuals these days, the ImageFX manual is a perfect bound beast – that's to say all its pages are glued on to a spine. This means you can't lay it out flat on its back without severely creasing the spine of this hefty tome. Bring back ring binders, I say.

TIME WASTING

PaintFX is a really good way of wasting the best part of a day in ImageFX. You can spend literally hours testing a paint effect on your picture, using the invaluable undo function and just trying a different style. Some of the effects can provide an excellent shortcut to producing abstract backdrops with no hint of their origins, with swirls of paint strokes, molecular chains, and hair playing a large role in the production of a wacky backdrop.

ImageFX 2 also adds a lightning facility, giving you the opportunity to artificially mood a peaceful night time scene with the addition

What use is AdPro now?

ImageFX might have taken over from AdPro as my image processing tool of choice, but there are still some things AdPro does better. One is cropping. With ImageFX you are limited to your preview screen, while AdPro puts the Crop Visual tool (and the scan tool and any other that requires high precision) on its own high resolution screen.

Even with the new Workbench preview modes in ImageFX, the resolution sometimes isn't high enough to get the accuracy you require. Another thing AdPro seems to be better at is scaling images. I've noticed that the quality of scaled images appears to be higher when run through AdPro's tools rather than ImageFX's. It's only a small difference and I may be being picky, but if your image is to appear in print, that most unforgiving of media, then scaling accuracy is a must.

Picture perfect

The process by which the example image was reached may be of interest to readers, so here it is step by step.

1. The original image. This picture is one of the sample images that come with ImageFX. Rather than simply including this in the review, I decided to add to it. So I started by creating a new, green buffer at the same size and an Alpha channel using the wave generator. I set the wave to emanate from the top-left corner of the picture and gently faded it away. I then composited the empty, green buffer with the sample picture using the waves for an Alpha channel. This resulted in a gradual fading of the sample image into the green buffer.

2. Next, I used the new 'Hockney Tile' operator to jiggle the elements of my new, composited picture. Hockney Tile allows you to nominate a background for the operation which can be a plain colour, or the swap buffer. I chose to have the operation take place over the original sample image for added interest.



The original sample image

3. Once I had done this and saved the result, I loaded a second picture by Tobias Richter and spent some minutes cutting a brush of the lead spaceship from it to paste into our composite picture. Instead of simply pasting it down, I used ImageFX's different brush modes to create a drop shadow for the spaceship. This was done using the Colour mode with black and a blend of 75 per cent. Once this was done to my satisfaction, I then pasted the ship down at a slight offset.



The composited image

everything

Ben 'Breughel' Vost puts down his paintbrush and picks up his mouse

What's new?

A list of new features in ImageFX 2.1 should include:

- Cybergraphics support for 15, 16 and 24-bit preview screens.
- Improved Video Toaster support for previews directly on a toaster buffer. (But who cares?)
- Added support for the HP Scanjet series of scanners.
- The image browser has now been updated to include CyberGraphics and Retina screens.
- ImageFX can now open its own Public screen for use with the Workbench preview method.
- In case you weren't aware of them, ImageFX added the following new features in v2.0:
- PaintFX. Simulated painting tools to add a paint texture to your images.
- Textures to make your image look as if it has been painted on canvas or vellum, etc.
- Lightning effects, Crystallise, Hockney Tiling and other post-processing effects.
- Improved font handling with multiple lines of justified text.
- AutoFX. New batch processor to replace IMP with improved features.

There are plenty more features to ImageFX v2.x than I have the space to list here.

of a bloody great thunderbolt. All the new PaintFX tools, as well as some of the more familiar ones, use a previewing system to allow you to have at least a vague idea of what is going to happen to your image.

However, while the new operators with their previews are very nice, it is hard work to have to create new lightning, lens flares and other effects inside a 64 x 40 pixel thumbnail. Perhaps in future versions, Nova Design might consider putting the tools directly onto the preview window.

With all these new tools and facilities, including the Amiga's only simple solution to creating Mpeg animations, ImageFX should win a lot of converts from the AdPro/Morph Plus stable. It will take AdPro users a lot of time getting used to the new interface ImageFX presents them, but the effort is worthwhile and made a lot simpler with the presence of the numerous tutorials in the manual and the AmigaGuide-based on-line, context-sensitive help.

If people like Amblimation could find a use for ImageFX back in version 1.5, they should be even more impressed by the current version and the added features it contains.

As for me, well, I can finally say that I am really happy to use ImageFX. Previous versions have frustrated me (and probably every other graphics card owner) with their crude preview display that meant 24-bit painting was not really something you could do.

The layout of the tools seemed odd to me (as a constant AdPro user), and still does at times. After all, why not put the redo function on the same button as the undo? But now, with a 24-bit preview screen (for when I get CyberGraphics), excellent painting and image processing tools, and nice little features like the ability to count the number of colours in a picture, or the on-line help, ImageFX truly is the King of Amiga image manipulation tools.

SYSTEM ESSENTIALS

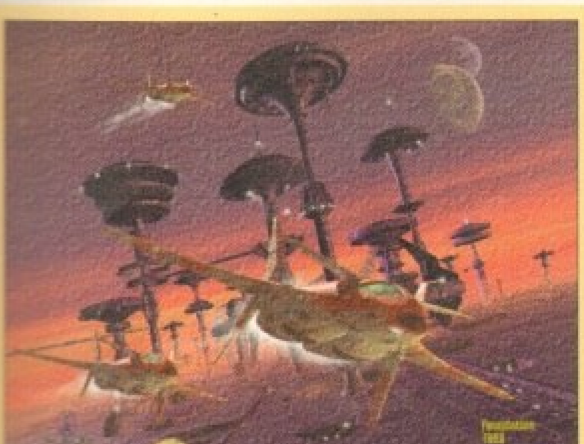
RED = Essential **BLACK** = Recommended

KS2.04 · 2 Mb RAM · Hard drive · 68030/040 · 10 Mb RAM · RTG card

The bottom line

Product: ImageFX v2.1
Supplier: Wizard Developments
Price: £99.99 (until 31 August '95, then £249.99)

Ease of use	**7**
Implementation	**9**
Value for money	**10**
Overall	**9**



An image by Tobias Richter. I applied the 'Vellum' texture



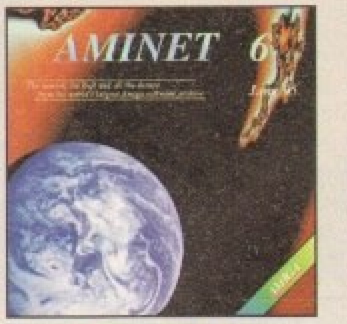
Our base image with the spaceship added



The completed image

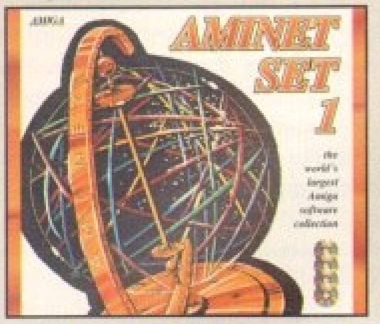
4. Nearly finished. I thought I might like to add a bit of text to show ImageFX can handle that too, so I got my trusty FuturaX font and wrote the words 'ImageFX v2.1.' I started by pasting this down on a plain white buffer, then I used the 'Gaussian High' convolution which resulted in the text being extremely blurred. I repeated this step once more, then inverted the image so that it was white on black. Once this was done, I tinted the blurred letters a faded green to look like a glow and picked them up as a brush.

5. I pasted the brush down on my original picture but found that because I had made the centre of the letters the same colour as the surround (black), it meant the centre of the letters was transparent. No matter, I just made a new brush from the original text and pasted that in over the top. As a final touch, I used the 'Radial Star' operator to put the nice starburst on the first letter of ImageFX.



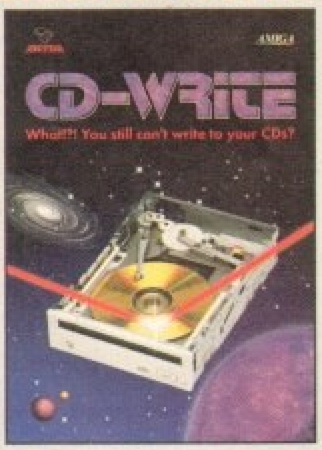
Aminet 6

Aminet CD 6, dated June 1995, consists of approximately 1,1 gigabytes of software in 3600 archives. Since the release of Aminet CD 5 more than 540 MB new software has appeared. The current edition has a special focus on demos, more than 1800 demos from Aminet were included. User friendly access software make the Aminet CD 6 a pleasure to use. £14.95



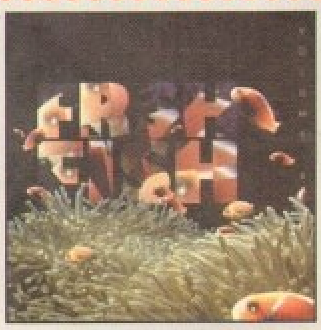
Aminet Set 1

Aminet is the world´s largest collection of freely distributable Amiga software. Up to 10.000 users access the vast archives every day and countless programmers publish directly via Aminet. Until recently access zo Aminet was restricted to international network users. With Aminet Set 1, consisting of 4 CDs, the complete archive is published the first time. This CD-ROM-collection, which is dated January 1995, offers an almost inexhaustible reservoir of top-value Shareware. A wide variety of programs is included: Applications, Games, Demos, Pictures, Mods, Animations, Developer-Material, ... It contains approximately 4 gigabytes of software in 12.500 archives and you will enjoy the comfortable user-interface. £29.95



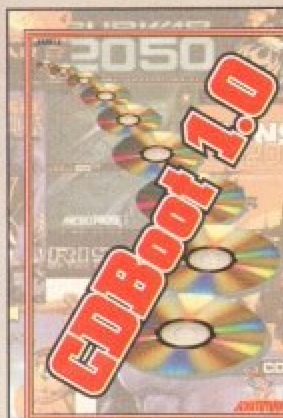
CD-Write

What!?! You still can't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schatztruhe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CD-ROM technology to its fullest. £44.95



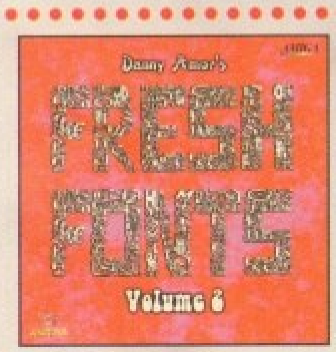
FreshFish 8

The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. £29.95



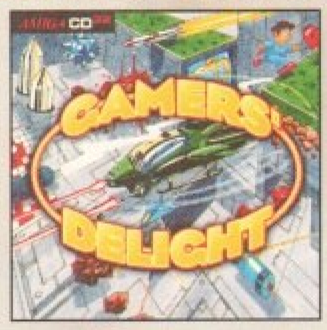
CDBoot 1.0

CDBoot is a fantastic new product that enables you to use almost any CD32 games on an A1200 or A4000 (with AT- or SCSI-CD-ROM drive and any filesystem). You can create a configuration file for each CD, containing information on the Joypad emulation. You can also save the highscore of each CD32 game. The usage and installation of CDBoot is very easy, also for beginners, due to the excellent English manual. Since the compatibility is very high, you can use 98% of CD32 games currently available. CDBoot is an excellent software solution for all Amiga-Freaks, who would like to enter the world of CD32 games! £34.95



FreshFonts II

The FreshFonts II CD-ROM contains 632 megabytes of fonts for almost any computer system. Most of the fonts are freely distributable, except for the Thienen fonts, which are exclusive on this CD. Each of these fonts is included in four different formats: DMF, Agfa IntelliFont, Adobe and TrueType. There are 231 font families on this CD (each containing of up to 8 different styles). They are classified in seven categories: Deco (63 families), Non-Latin (33 families), Pictures (16 families), Sans Serif (29 families), Script (36 families), Serif (36 families), Thienen (19 families). £19.95



Gamers' Delight

This CD contains 40 games for the Commodore Amiga from differing categories. Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Gamers' Delight will hold you captivated for hours and guarantees long-lasting pleasure. All games are commercial versions - no public domain & no demos! This CD can be run on any Amiga with CD-ROM drive, CDTV or Amiga CD32 Console with 1 MB free memory and Joystick/Joypad. £29.95



GoldFish 2

Volume 2 of the GoldFish series contains a selection of software, animations, pictures and other material released on FreshFish CD-ROM's between October 1993 and November 1994, with most of the material updated to the latest available versions. All material is included in both archived (BBS-ready) and unarchived (ready-to-run) forms. £29.95



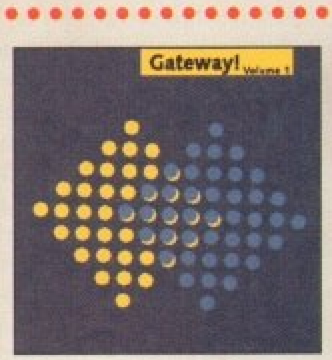
LIGHT ROM

The LIGHT ROM CD contains almost 650 megabytes of 3D objects, images, images equences, scene files, surface attributes, bump maps and textures in IFF and TARGA formats, DEMs, and Lightwave related text files. LIGHT ROM is an invaluable resource for Lightwave users, and as a bonus, includes material for Sculpt 3D and Imagine users. £44.95



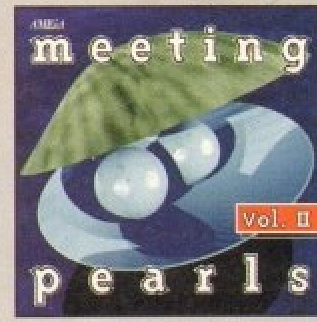
Magic Illusions

3D Stereograms on your screen! A new, interesting entertainment is born: Without special aids a three dimensional colourful and fantastic object appears suddenly on a two dimensional strangely patterned picture. The illusion of depth has already stunned millions of people around the world. Now you can view the stereograms at home on your screen! All you need is on this CD. Besides 200 stereograms with varying difficulty, there is software on the CD, which enables you to create your own 3D pictures. £12.95



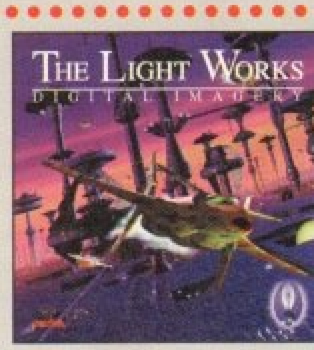
Gateway!

Gateway! offers NetBSD 1.0, a full featured UNIX-like operating system with both sources and binaries for the Amiga, i386, Sun 3, and other architectures. Go netsurfing with the large selection of supplied networking tools. Other supplied packages include a binary release of the X window system (X11R6) for the Amiga, with many additional clients, and packages such as perl, emacs, games, mail programs, and many megabytes of important text files such as RFCs and FAQs. A complete installation guide is available on the CD. There are also some AmigaDOS internet utilities, such as clients for AmiTCP and Envoy. £9.95



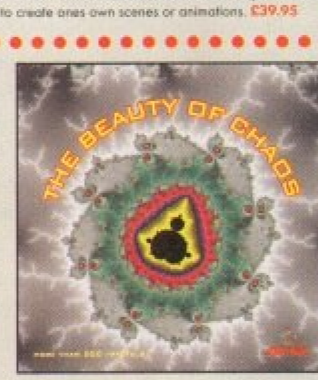
Meeting Pearls Vol. II

The Meeting Pearls Volume II contains 650 MB of the finest FD soft-
ware via a special user interface, which has been created to allow
you to find the program of your choice with ease. The contents: 2
MB of selected html-pages - 50 MB graphics programs and data -
MB games - 10 MB from "The Party '94" - 13 MB disk, hard disk
CD-ROM and SCSI tools - 19 MB various other tools - 11 MB educa-
tional software - 25 MB terminal programs - 25 MB animations
mainly from Eric Schwarz - 40 MB developer tools (e.g. pre-installed
compiler (DICE, Oberon, Modula), Commodore-Includes, GUI-Tools
- 9 MB music programs - 10 MB midi programs - 27 MB pictures - 6
MB texts, FAQs, CD contents files, etc. - 40 MB linux for Amiga - 10
MB TeX installation (PasTeX incl. 600 dpi and fax fonts) - 38 M
movie data base - 50 MB archives for Psion - 18 MB modules - 5
MB NetBSD for Amiga, ... £9.95



The Light Works

Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing and today it is still a leader, with many high quality programs. A re[...] artist of raytracing is Tobias J. Richter from Cologne/Germany whose detailed objects stun the people. Especially his space ships [...] famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremly realistic due to the application of complex surface textures of the models. Until now it was difficult to acquire these objects [...] order to create ones own scenes or animations. £39.95



The Beauty Of Chaos

Dive into the fantastic world of the fractal geometry and make a [...] journey through the depths of the mandelbrot set. This CD includes 507 mandelbrot pictures in GIF format (256 colors) in the resolutions 1140x890,1024x768, 640x480 pixel, 20 selected true color pictures in TIF-format, Graphic viewers for PC, Amiga and Macintosh (packed). £14.95

All products are available in your local Amiga-shop or through national mail-order-companies

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Alternative CD praise

prize letter

I just wanted to write into your magazine and say what a good job Gareth Lofthouse is doing reviewing the current flood of CD-ROM titles for the Amiga. After buying my Squirrel and CD-ROM drive I made a few mistakes when it came to buying software to work on my machine, but now I wait patiently every month for Gareth's sage advice.

Brian Fentle, Hove

This letter is such a refreshing change. Mr. Fentle gets the Star Letter for not even mentioning the covermounted CD-ROM. Even as I type, Gareth is sitting at his desk preening. Soon his head won't fit through the doors of our office and he'll have to stay here 24 hours a day reviewing CDs.



esp EZRA SURF'S POSTBAG

CD-ROM delights, lightwave complaints and proof that even PC owners read Amiga Computing

Medium, or large?

I just had to write and thank you for the excellent CD-ROM on the front of your magazine. However, even though I have an A1200 with CD-ROM I would not like you to concentrate on one medium only.

There are countless youngsters with an Amiga who are unable to afford the asking price of a CD-ROM drive, so I would be very happy if you continued to appeal to both mediums. Thankyou once again.

P W Morey, Sidcup

Have no fear Mr. Morey, *Amiga Computing* will be continuing to support floppy disk users. However, we will continue to bring you the best cover-mounted material whatever the format, so keep reading.

OS who?

It's not often I see an Amiga mag with a CD around here (in fact it's the first time), so when I saw the May issue of *Amiga Computing* I just had to buy it, especially as it had many files which are not Amiga specific. Let's face it, as a PC user there's not much I can do with Amiga programs, but on the other hand some Adobe fonts are always a useful addition to OS/2, and so is a lot of other stuff on the disc.

I was also pleasantly surprised to find PC utilities on the disc. While I find it strange that the picture utilities could display everything but Jpeg and HAM images, the MOD player utility was nice, even though it didn't work under OS/2.

Anyway, it's a really nice CD and a good excuse to buy an Amiga mag. I hope you'll have more of these useful CDs in the future.

teler@cs.huji.ac.il

I'm glad you liked the CD. By the way, as I'm pretty sure you won't be reading this because we don't have a cover-mounted CD this issue, I would just like to say that as far as I understand it, OS/2 would appear to mean an operating system divided by two, or half an OS. How does it feel to have to pay extra to get a multitasking operating system, especially as it doesn't work with anything?

Yet more CD praise

I am writing to congratulate you on the latest edition of *Amiga Computing*. I always consider it to be the best of the Amiga magazines. I have just purchased a Power CD-ROM which uses Squirrel SCSI interface and was feeling a bit lost with not much to try out on it.

I had a disk from CD32 Gamer but had to use the CLI to get at most of the available software – there is some I don't think I can get at all. So I was beginning to wonder if I would have been better buying a modem, when along came your May edition with a CD-ROM freebie. All great stuff and I haven't looked at half of it yet.

If this is the future the prospects are good. I appreciate that you will not be able to provide so many goodies every month, but please more CDs in the future. Well done!

D F Nunn, West Sussex

Coo! I don't think I can make another original reply to yet another letter praising our CD covermount. I'm glad you like it.

Escom worries

I have been following the Commodore liquidation process quite carefully and having recently read the latest Amiga Report, A1200, with its wonderful AGA chip, is probably going to be the saviour of the new owners of Commodore and that you must look after your potential market, but please don't forget the army of faithful A500 users who have also been faithful readers of your magazine.

M Bates, Hatfield

Dear Mr Bates, I understand your concern, but it has to be said that the computer business is one of the fastest-moving in the history of industry. We have already pretty much stopped supporting users that still have Workbench 1.3 machines and while we have no intention of dropping support for ECS-based machines, you do need to realise that A500 owners are eventually going to be left completely behind. Today's machines overshadow the A500 and we, as a magazine, always want to be looking forward, not back, to the dim and distant past.

Moan

I have been a reader of *Amiga Computing* for many years now and have had nothing but praise for your journal. What I don't understand, after having read the latest issue, 87, which filled me in on the demise of Commodore and tells me that the most successful model produced was the A500, is why, oh why do your CoverDisks contain less and less usable software for the most popular Amigas ever sold.

Like me, I am sure there are many A500 and A500+ users that have upgraded their machines, at a great expense, yet how are we now being treated?

Last month's issue included a CD that is unusable by an upgraded A500, this month's issue a floppy for A1200 only and a floppy that requires the LightWave program – not an inexpensive bit of software. What are we to be treated to next issue? I realise that the

have to say that I am slightly concerned about whether Escom is going to provide a good service for existing Amiga users.

It would appear that they are very keen to bring back old workhorses like the C64 and A600, along with brand new machines. But how about us A1200 owners? Are we going to get left behind in this sudden rush to new technology, or will Escom continue to support us?

As a subscriber, I really like the fact that you printed a general survey recently and the games survey in this month's issue. It makes me feel as if I have some sort of influence over the way the magazine looks and reads, which can only be good for the mag in the long run.

Kevin Anderson, Northwich

Dear Kevin, your concerns over the future of the Amiga are echoed by a great number of people, both end-users and developers alike. Escom's main objective is to get machines back into the shops as soon as possible and with the Amiga 1200 arguably being Commodore's best-ever Amiga, I'm positive you won't need to worry about continued support from Escom.

As yours is the first of the games surveys to come in, we're going to send you something nice from the games cupboard, just for being the first of many. Surveys are certainly one of the ways you can influence how *Amiga Computing* looks, another is to send us large bundles of cash in plain envelopes along with your requests, but so far nobody has taken us up on that method.

letters please

You asked for more letters pages, but what you don't seem to realise is the fact that you have to write into us. To give you a further incentive, we will offer £50 from Adam Phillips' wages to the best letter written. But please keep quiet about it, as Adam doesn't know... he's in Australia at the moment sunning himself, so he won't miss it.

Safe sheep seek super software

Would it be possible to have *Amiga Computing* maintain some sort of file section where one could download the PD software mentioned in your magazine? I do enjoy reading your magazine and often come across some interesting PD programs reviewed that are not available on Aminet. It would make life a heck of a lot easier for those of us not in the UK.

Philip McDunnough, LakeHaven, (Where sheep may safely graze...)
philip@utstat.toronto.edu

Not a bad idea at that. It'll take some working out, but expect to see a selection of the more popular PD reviewed to appear on our home page.

LightWave, LightWave, more LightWave!

I have read your Magazine for over five years now and find it interesting and informative. However, I have noticed a worrying ailment lately: LightWave fever. I know that LightWave is a very exciting product which does push the Amiga into professional circles, but the average reader does not have the money or hardware to run such a program. Your latest cover disk can only be of use to those with the memory (about 12Mb recommended I believe) and fast enough CPU to run LightWave, never mind the £400 to buy the program.

Please do, in future, keep us informed about this part of the Amiga scene, but it can only put your readers off when one coverdisk can only be used by about 1 per cent of them. Keep up the good work and please make sure you badger Escom to make the right decisions for the Amiga's future.

Stuart Marsden
smarsden@cs.strath.ac.uk

A bad month for the coverdisk, then. It's so true that you can't please all the people all the time, so what should we do? As we have said before, LightWave is the single most important milieu for Amiga developers at the moment. Nuff said.

What price Glory?

About seven months ago I bought the superb Microprose wargame Fields of Glory and have since enjoyed playing it immensely.

However, I paid almost £36 for it then and now the game has been re-released on the new 'Power Plus' range for only £17, almost £20 less than it was selling for a couple of months ago!

While I understand that games will inevitably be re-released as budget titles eventually, I'd have thought that Microprose would have at least had the decency to wait a while longer, say until the game was a year old or so, before reducing the price.

I, and no doubt everybody else who bought this game, feel a little cheated knowing that if they had waited merely a couple of months more then they could have got it at less than half the price. In future I'll be very dubious about buying new full-priced products.

D O'Connor, South Yorkshire

Hmm. Probably a poor decision on MicroProse's part to re-release it so soon, but then again, what tends to happen is that once sales die off for a particular title, it is immediately submitted to exactly this sort of treatment. The only way you can look at it and still stay relatively mellow is to say to yourself, "Well, I've had seven months worth of enjoyment for my extra twenty quid."

Wonders of the Web

Your website is much better than Amiga Format's (I thank you)

Dan Ward
dward@bournemouth.ac.uk

Of course it is. And anybody wishing to have a butchers at our site should point their browsers at:
http://www.demon.co.uk/amigacomp.html/

Stuck in the ice

I am the proud owner of a CD32 machine which I bought in January of this year. One of the games I bought for it is Deep Core by International Computer Entertainment Ltd in Gloucestershire.

I have enjoyed many weeks playing Deep Core and successfully reached level three. To do this you have to find an elevator key which gives you entry to the lifts at the end of each level.

Imagine my surprise when, at the end of level three, key in hand so to speak, I enter the lift and... nothing happens! I cannot get out of the lift and the display does not change. I have done this several times and each time got 'stuck in the lift.'

I wrote to ICE enclosing a stamp for reply asking if the CD was faulty, had it happened before, etc? I received no reply. Several weeks later I wrote again – still no reply.

I am therefore writing to you for help:
1. Have you or your readers ever had this problem?
2. Is my CD faulty?
3. Do ICE still exist – are they still trading?
4. Have I written to their correct address?
5. If I have, why don't they answer?

On a separate matter, thank you for the CD on your May issue. I have my CD32 hooked up to my A500 and appreciate the software on the CD.

I am loath to change my A500 having got a large collection of 'serious software' and would like to read any articles in your magazine about how to actually get the software from CD32 to A500. There is little guidance when you buy the CDs, so an article would be nice.

G A Course, Dorset

I'm really pleased we've had such a good response from the CD covermount. As for your problems with ICE and DeepCore, we spoke to Stuart Bell at ICE and he assures us that there are no bugs in Deep Core.

He said that if you have a particular problem with a game then you can send it back to them and they will replace it completely free of charge. Lastly, have a look at the Making the Connection feature in this very issue to find out a bit more about joining two machines together.

public sector



Dave Cusick opens the cheap and cheerful chest once more and grunts approvingly at the contents

Outside the weather is fine, but time and tide and Public Sector deadlines wait for no man. Once more I find myself hunched over a hot keyboard humming Boo Radleys' tunes and sifting my way through the PD pile

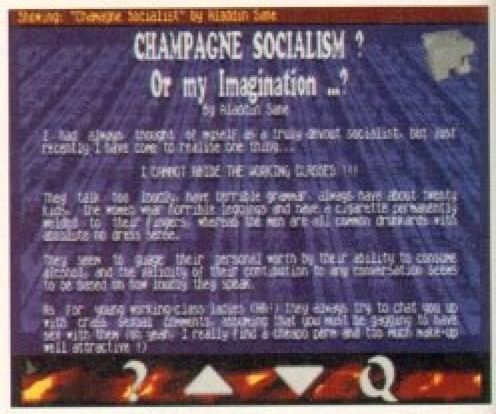
PD of the month

The Word 5

Programmed by: NFA
Available from: SAdENESS PD

This is the most outstanding disk magazine Public Sector has received for some while. The whole thing starts with a decent intro which, as the authors are keen to point out, is all the more impressive for being totally written in Amos Basic.

From the main menu, articles are on offer covering a whole range of topics.



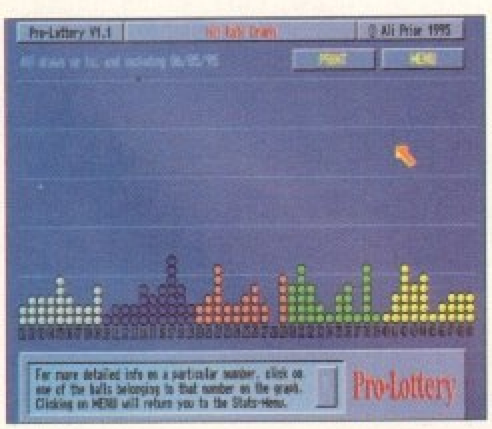
You may not necessarily agree with some of the views expressed within, but The Word is worth a read

Included are a couple of games reviews, a Coders' Corner, and numerous offbeat features ranging from Sponsored Resignations to a Brief History of Booze.

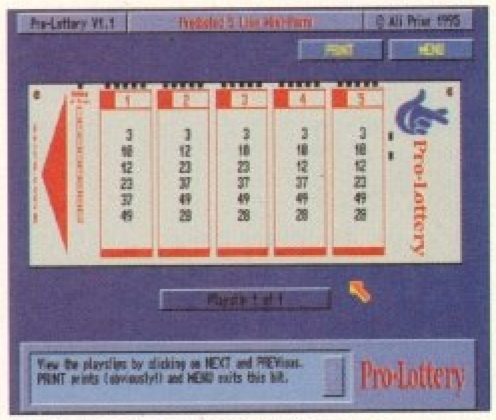
Pro Lottery 1.1

Programmed by: Ali Prior
Available from: Ali Prior

Some nights I wake up in a cold sweat, shuddering after suffering through a terrifying nightmare. In it I am sitting at my Amiga with a pile of jiffy bags. I select a particularly inviting bag and tear it open, eagerly anticipating a stormingly original piece of high quality software. But the disk label says 'Lottery Predictor.' The more cunning



The winning numbers' database is a couple of weeks out of date now, but it seems 28 has yet to come up



Pro Lottery's suggested numbers for next week. If they win you some money, donations are welcome

Lottery Predictor authors have obviously finally realised that many innocent PD reviewers are in a state of despair. In an effort to avoid being responsible for possible suicide cases, they are now resorting to more subtle methods of presenting their labours of love. The two disks inside this particular jiffy bag were cryptically marked only with a giant question mark. Unfortunately, the concern for my welfare stopped there, and I was lucky to avoid being blinded by the fluorescent orange disk labels and the accompanying luminous yellow letter.

Still, as the introduction (which takes up the entire first disk of the review copy) is keen to point out, this predictor is slightly different from the rest. For a start, it features the same attractive presentation as Mr Prior's previous offering 'Pro Gamble.' But most usefully, it is capable of producing lists of numbers for syndicates, covering as many likely winning balls as possible.

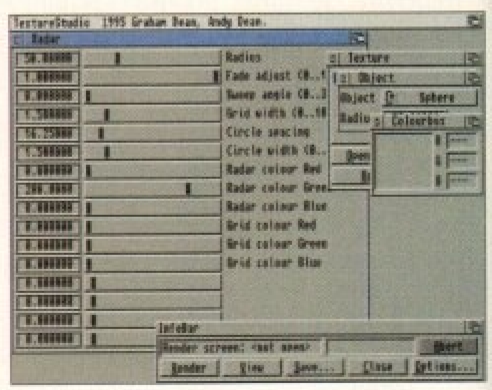
The whole package has an air of professionalism about it, although as with all such programs, it is difficult to know how effective Pro Lottery is without using it over a long period of time. Before making the decision about whether to purchase the registered shareware version of the program or not, you might, therefore, like to try out the free demonstration version. This can be obtained from the author by sending a blank disk and an SAE.

TextureStudio 1.0.2

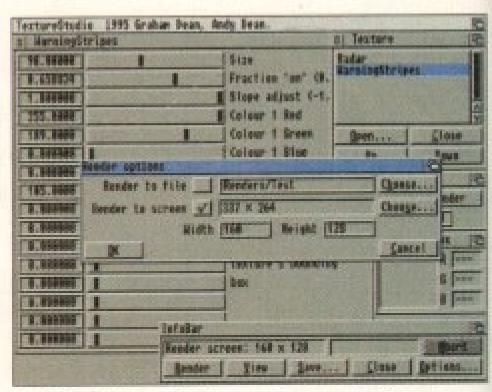
Programmed by: Graham and Andy Dean
Available from: Graham and Andy Dean

Raytracing is a popular pastime among members of the Amiga community but the main problem, with getting into this area, is the prohibitively high cost of software. Accelerator cards and floating point units cost enough, but then there's the expense of buying top quality software packages like LightWave and Imagine 3.

Users of the latter package could, therefore, be very interested in this release from the creators of ImageStudio. TextureStudio is capable of loading Imagine 3 format texture modules, which can then be modified and mapped onto planes, cylinders or spheres and rendered to a preview



A vast range of features are at your disposal within TextureStudio



Setting the rendering preferences prior to producing a quick rendering of a texture

There are even several strange lists such as '13 Movies with Armadillos in them' and '10 rivals of the Teenage Mutant Ninja Turtles' (of which 'Pre-pubescent Irradiated Jujitsu Wildebeast' is among the top picks).

The articles are generally quite short but there are plenty to choose from. The program helpfully ticks the articles you have viewed so you don't end up accidentally reading the same one twice. While there are quite a few spelling mistakes knocking about, The Word is certainly less guilty in this area than many disk mags.

When reading The Word, it is easy to see that a good time has been spent on presentation and feel. Articles are written in attractive and readable fonts, and are overlaid on a neat smoothly-scrolling backdrop. The whole interface is charmingly straightforward and using the program really is an enjoyable experience. If you're after an interesting and frequently amusing read and you don't mind the occasional bit of bad language, The Word could well be worth a look.



Take your pick from the lengthy scrolling list of articles on offer

screen. The principle benefit of this is that texture characteristics can be altered without the need to raytrace an entire image every time. Textures can also be saved to disk as 24-bit images in IFF24, Jpeg or Targa format for loading into other programs.

All of the program's main functions can be accessed from floating windows, and the attractive Workbench 2 interface makes getting to grips with the powerful functions on offer a painless affair. The program requires an FPU which it makes full use of, containing optimised code for 68881 and 68882 units.

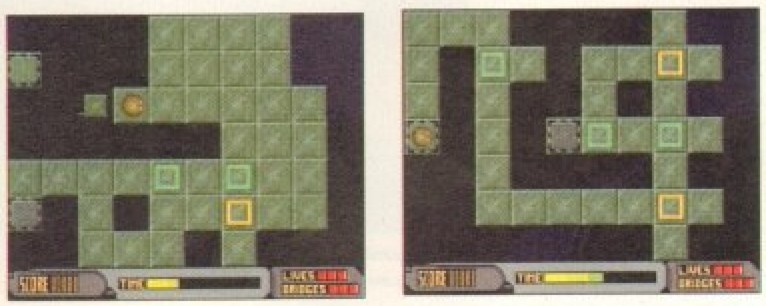
There is a commercial alternative, Forge, which comes bundled with a ready-made texture collection Essence but has a fairly hefty price tag though. In comparison, the £10 registration fee for TextureStudio seems pretty attractive.

Jump 'Em

Programmed by: A. Cashmore
Available from: OnLine PD

This is a 10-level demo of a cracking 40-level puzzle game. It's got everything – cheesy, chirpy music, cute and attractive graphics and gameplay that will have you tearing out your hair. The objective on each level is to reach the exit, clearing the screen of tiles along the way. This is achieved by walking on the tiles causing them to fall away into space below. Some tiles must be walked across two or three times before they disappear. On later levels there are also teleportation tiles to make things that little bit more tricky. If you get stuck, you have three emergency bridges at your disposal – but once these have been used, stepping where there are no tiles results in the loss of a life.

Good looks, alright to listen to, good to pass a bit of time with... it's not Andy Maddock, so it must be Jump 'Em



The game features a password feature, which I can see proving very useful on later levels. Considering the full game costs just a fiver and includes extra features such as two new sub-games and an end-of-game sequence, Jump 'Em comes highly recommended and is sure to provide hours of brainbending amusement.

Glory box

We want to hear from you if you have any program, whatever its purpose, which you consider worthy of review. Whether it will be freely distributable public domain, shareware or licenceware, if you feel it's of sufficient quality to merit coverage then stick it in a jiffy bag or padded envelope and send it in with all haste. I promise I'll at least look at your work. Please clearly label the disk, and include a cover letter supplying a description of the disk contents, price and some basic instructions. The address to send the disks to is:

Dave Cusick
PD submissions
Amiga Computing
Media House
Adlington Park
Macclesfield SK10 4NP

UTILITY of the month

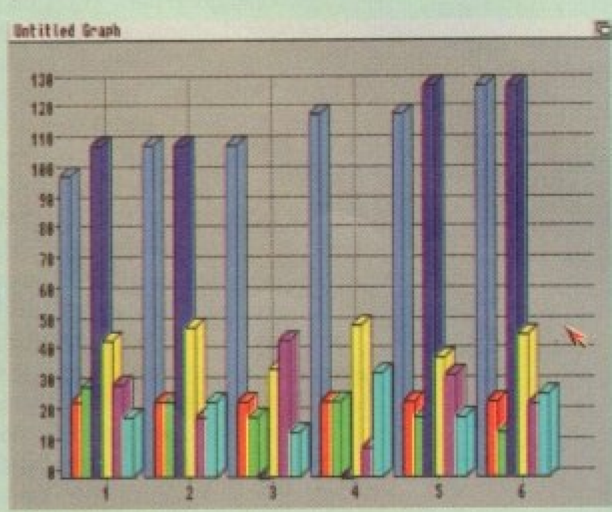
EasyCalc 2

Programmed by: Andrew Woods
Available from: KEW=II Software
Disk No. A1103

Exciting they may not be, but Spreadsheets are extremely useful programs to own. The most obvious use for them is for organising your accounts, but everything from league tables to statistical surveys can benefit from the use of one. EasyCalc 2 is perhaps the most intuitive I have come across, and although the full shareware version costs £20, this trimmed down demonstration version is almost fully functional, allowing you to get a very good idea of what to expect from the full version.

While spreadsheets can sometimes be a little slow to set up, once in operation they can make tedious tasks like budgeting so much easier. Once a few numbers have been keyed in, almost every conceivable mathematical operation can be performed on them, from simply adding to logging or square rooting. Change one or two numbers and then hit a button and every number in the entire worksheet will be recalculated accordingly.

EasyCalc lives up to its name, making full use of a Workbench 2 interface and providing on-line AmigaGuide help for those perplexed by the striking array of features. It can produce graphs which can be saved out as IFF picture files, it fully supports ARexx, and is highly configurable. If you're fed up with scribbling figures on scraps of paper, EasyCalc is the perfect answer.

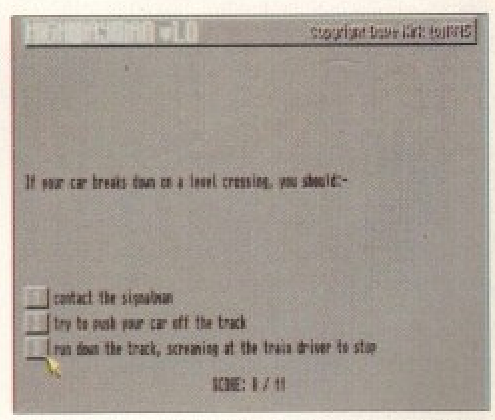


You too can have something on paper to show your bank manager, thanks to EasyCalc

Highwayman

Programmed by: Dave Kirk
Available from: Saddle Tramps PD
Disk No. E88

I'd guess that driving tests would come somewhere between job interviews and moving house in the stress-inducing top ten. While Highwayman won't sort out substandard signalling or pitifully poor parking, it should certainly be of assistance to those ➤



Highwayman – lots of 'No motorcycles on roof racks' jokes will inevitably abound

who struggle with the Highway Code. Highwayman is a quiz program featuring a total of 150 multiple choice questions, some based on pictures of road signs and others being text-only. Before beginning the quiz, it is possible to select the number of questions of each kind you will face. When you've finished struggling to remember the typical car stopping distance at 60mph and other such details, the program will present you with a percentage score.

It's a very simple idea but one which I'm sure will prove immensely popular. If there's one criticism I would make it is that often, two of the three possible answers to a question are so obviously wrong that they stand out a mile. Still, even when this is the case the actual selection of the correct answer serves to aid recall at a later time. If the big day is looming and your confidence is a little lacking, getting hold of Highwayman would be a good move.

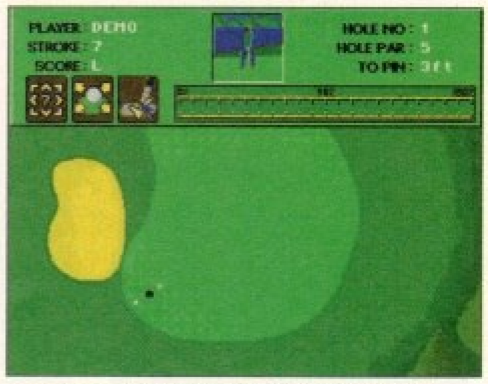
International Golf Demo

Programmed by: Summit Software
Available from: Saddle Tramps PD
Disk No. G294

Golf is a difficult game to simulate effectively, which could be why I found a certain something lacking in this demo of Summit Software's new release. Perhaps I'm being a little harsh, but since you'll only get a penny change out of fifteen quid for the full commercial release, I was a little bit frustrated by some of the gameplay limitations. I just can't put my finger on it though. The interface is



I don't want to give it too much strength or I'll overshoot the green



I've a chance for a score in single figures – you can tell this isn't real life

functional enough, so it can't be that. Admittedly, sometimes it can be easy to forget to alter the shot direction because the program only does this automatically when you are standing on the tee, but to be fair this is only a problem because I am used to the slightly different control systems of other golf games.

I don't think it was the graphics, which are attractive enough, if a little disappointing, considering the price tag. It might have been the sound effects, although the fact that all I got was a high-pitched screeching noise may have been due to machine incompatibility problems, and these could be ironed out by the final version.

It could be that I was just hurrying too much, because the demo only lasts for three holes or five minutes. After several re-runs I did make it onto the third hole, but the first couple of times I ran the program the five minutes was spent deciphering the control system anyway.

The full version boasts two full courses, a tournament option and 64 computer controlled opponents. Unfortunately, based on this demonstration I don't think there will be many takers, especially considering the low prices of commercial rivals Microprose Golf and PGA Tour Golf these days.

SplatterPaint

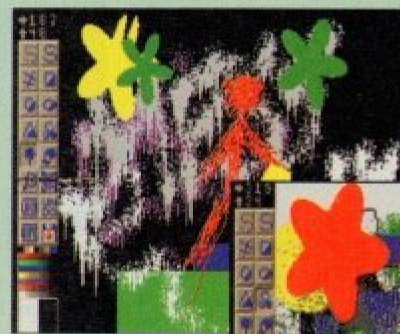
Programmed by: Pete W Storonskij
Available from: Roberta Smith DTP
Disk No. CU107

I suspect SplatterPaint is aimed at younger Amiga users but that does not stop it being an immensely entertaining program for children of all ages. That it has much in common with the grandfather of paint programs, DPaint, is not especially surprising – practically every art package does. However, SplatterPaint has a special twist – it has a selection of messy drawing tools that are the Amiga equivalent of those reception class aprons-on slopfests.

Big coloured polygons can be slapped onto pictures with a couple of clicks, and flower shapes are equally easily applied. But the real fun begins when you select the Spraycan. Scrawl some barely legible letters across the screen and they will drip and splatter as if being sprayed on a wall. Adjust the nozzle size and shape and then have another crack – it's great fun and is sure to keep little fingers happily mouse clicking for hours at a time.

SplatterPaint can also be used for more serious artwork. All the normal drawing tools such as dotted and continuous freehand lines, rectangles, circles and area fills are included too. For detailed work there is a basic magnification option and it is possible to cut, paste and flip blocks. The 64-colour palette is fully selectable and colours can be swapped, copied and spread over a range shades.

Admittedly, you are unlikely to produce a masterpiece using SplatterPaint, but to be fair I am sure it's not aimed at experienced graphics artists and it's hard to find fault with such a diverting program, especially when it's free.



Indulge your creative urges with SplatterPaint



I know it looks pretty poor, but if this was by a famous modern artist it would fetch millions

Even better than the real thing

Regular readers may remember that back in issue 82, the Art Of The Month accolade was awarded to Simon Lee for some stunning raytraced graphics. He recently wrote again enclosing a selection of his latest work, which is of an equally high standard and which he hopes to make available soon through the 24 Bit Club. Meanwhile, Simon is offering his services at very competitive prices, for instance he anticipates charging around £30 for a highly detailed model. Anyone interested should contact him at the address on the right.



One of Simon Lee's latest pictures, and typically stunning it is too

What do you want from me?

Graham and Andy Dean
14 Fielding Avenue, Poynton, Cheshire SK12 1YX

KEW=II Software
PO Box 672, South Croydon, Surrey CR2 9YS
(Tel: 0181-657 1617)

Simon Lee
Lupus Productions, 4A Brecon Square, Ramsgate, Kent CT12 6NS
(Tel: 01843 583756 after 6pm)

OnLine PD
1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX
(Tel: 01704 834335)

Ali Prior
10 Lovell Park Heights, Leeds LS7 1DP

Saddle Tramps PD
1 Lower Mill Close, Goldthorpe, Rotherham S63 9BY
(Tel: 01709 888127)

SAdENESS PD
13 Russell Terrace, Mundesley, Norfolk NR11 8LJ
(Tel: 01263 722169)

Roberta Smith DTP
190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE
(Tel: 0181-455 1626)

The dispeller of despair, the light at the end of the dark tunnel. Yes, it's the ACAS pages in time to save all you anguished Amiga owners in need of help



acas
AMIGA COMPUTING ADVICE SERVICE

Backup blues

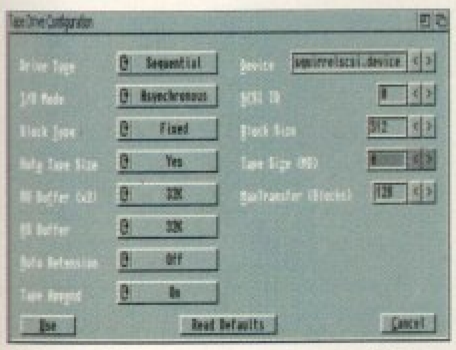
I am shortly to buy the much praised SquirrelSCSI adapter from HiSoft to connect a 540Mb SCSI hard disk which was given to me by my father. As you can guess, this is a drastic change from my simple dual floppy-based system and I am looking forward to no more disk swaps and having Workbench available instantly.

My father has also suggested I get hold of some disk backup and maintenance software and I have decided on AMI Tools and backup software. He also says that ideally, I should invest in a tape drive device for a fast and convenient backup storage device. Will SquirrelSCSI and, indeed, AMI Back work with such devices?

J Samuels, Prestwich

The SquirrelSCSI software doesn't explicitly support tape drives. They do show up as SCSI devices on the SCSI chain and it's simply a matter for third-party software, AMI Back in your case, to access this device directly.

Tape devices are certainly one of the best methods of backing up hard drives and I would think that you shouldn't have any problems with SquirrelSCSI and AMI Back communicating with such devices. If you do, HiSoft, the suppliers of SquirrelSCSI, have a customer support service second to none and I'm sure they could help with any problems should they arise.



Using a SCSI tape streamer connected to the A1200 via the SquirrelSCSI host adapter should work fine with AMIBack backup utility

Dead A500?

Every time I switch on my Amiga 500, the power light flashes and the screen goes green. What's wrong? Is it time to buy an A1200 now?

H Moore, London

Go on, be a devil and treat yourself to an A1200, you won't regret it – they're great. Your A500 is probably dead, I'm afraid.

Coloured screens usually mean a component problem. Most of the major chips in an A500 are socketed, so it's possible, but not guaranteed, that one has come loose. Open up your A500 and push all the socketed chips down, making sure you have switched off the power and touched something earthed to get rid of any static first though.

Wassat then?

Having recently bought a second-hand A1200 and being very new to Amigas, I was wondering if you could tell me what the rectangular hole at the back of my A1200 (right next to the mouse port) is for. Has something important been removed?

M Timperly, Warrington

Don't worry, nothing important is missing. Usually, that hole is covered by a blanking plate. The hole is simply there for any third-party hardware developers to use for their expansion boards if needed, although I don't know of anyone who has taken advantage of it yet.

Clickless

I'm not an impatient person, or even one given to bouts of violence, but if I have to listen to the floppy disk clicking noise anymore when the drive is empty I will be driven to taking a implement of substantial mass to my newly acquired A1200. Please, please tell me how to stop it before I snap.

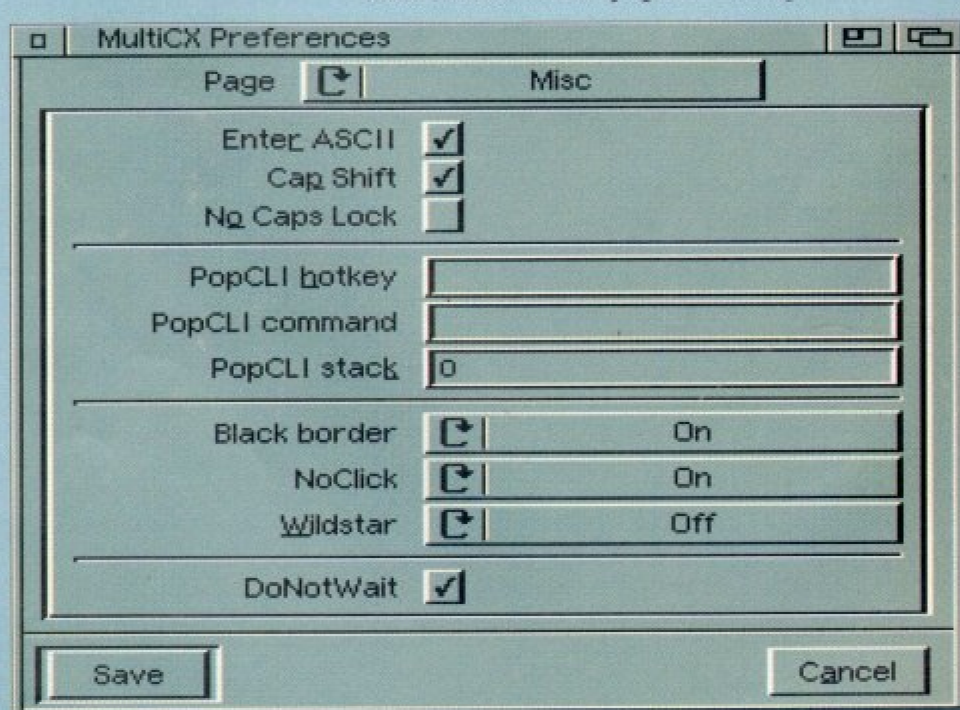
A Cowley, Bedfordshire

Oh dear, the age old and understandably annoying clicky drive problem rears its ugly head again. It's good to see newcomers are still entering the Amiga scene and is a good reason for Escom to get Amiga production up and running again.

Your problems are easily solved. Simply refer to our July issue CoverDisk, specifically CoverDisk number 2. On here you will find a brilliant utility called MultiCX. This little wonder of wonders has many features built in to one program, most important in your case is the NoClick function which can be easily activated via the MultiCX Prefs utility which accompanies MultiCX on our CoverDisk.

Once activated, you can say good riddance to those clicky drive blues. Hurrah for MultiCX.

One of MultiCX's many features is the NoClick function which turns off the annoying drive clicking





Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your Amiga software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a thorough description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.

Any questions?

Mind your language

I am 14-years old and have set my sights on a career in computer programming. I currently have an Amiga and would like your thoughts on which programming language to choose from.

I am interested in C and assembly languages as these seem to be the choice for most games programmers. Which one would be the one to learn for a games programming environment?

G Watson, Essex

Today's games programmers are generally using a mix of the two. The core of the game code is often written in C to aid portability and reduce development time. Then, any areas which need to be fast and efficient are written as assembler routines and incorporated into the main game code.

Therefore, to have an advantage over other people pursuing careers in games programming, you should ideally have good working knowledge of both.

Where are they?

I was wondering if you or any of your readers could help me find the following programs:

1. Magic User Interface
2. Any program that can convert IMG clipart to standard IFF clipart
3. A program that will help me create ANIM files from a collection of IFF pictures. I have tried MakeAnim but could not get it to work as it kept crashing my system.

All the programs must run on my system which is an A500+, 4Mb RAM, 40Mb A500-HD+ hard drive and a A570 CD-ROM.

D Elliot, North Hykeham, Lincoln

Your first question is easily answered and you may even have it already if you regularly buy *Amiga Computing* (you do don't you?) MUI can be found on the CoverDisks of our July issue. It's a fully-registered version exclusive to *Amiga Computing* and is simply brilliant.

I think the new owners of Commodore – Escom – should have a chat with Stefan Stuntz, the author of MUI, to incorporate his code into a newer version of the operating system when they get around to re-establishing Amiga production and development. I came up blank on your second program for converting IMG clip art to IFF. You could try one of the many DTP packages around, which may let you import an IMG image and export it to the required type, but buying a complete DTP package for this sole purpose may be a tad expensive.

Any readers out their know of a suitable utility which can do this? Finally, the program you need for creating ANIM files from IFFs is called MainActor, which can be found in the public domain.

Clean up

I have recently lost a disk with some important information on it due to a spillage accident involving a coffee mug and my wayward elbow. I was wondering if there is any cleaning kit which can clean the actual magnetic media inside the disk casing for situations like this?

L Peters, Somerset

There are no such cleaning kits available I'm afraid. The magnetic material inside floppy disks is rather delicate and susceptible to scratches.

However, I recently had a coffee incident with my LightWave installation disks but did manage to save them. I shall relate the whole sorry story to you, which begins shortly after I recovered from the shock and managed to stop swearing profusely. Once upon a time...(let's not get too carried away eh? – Ed).

The first thing I did was soak up the excess coffee on the exterior of the disks using simple kitchen roll. Next, I grabbed the bottle of cleaning fluid which comes with the many disk drive cleaning kits on the market. Such fluid is often alcohol based and is good at dispersing unwanted stains, while quickly evaporating.

At this point, my coffee-stained disks were starting to get a little sticky, so I proceeded to put drops of the cleaning fluid on the disk covers, rubbing it in with my finger. This seemed to disperse the sticky coffee residue and, because most cleaning fluid evaporates quickly and easily, it left the disk covers dry and a lot cleaner.

The next tricky step was dealing with the metal slider which protects the magnetic media inside the disk case. As you can probably guess, the slider was not at all well. A healthy slider quickly snaps closed when you release it thanks to the little spring hidden away inside. The coffee saw to it that this was not going to be the case any more and made the slider stick open and feel as if it was moving over a layer of treacle.

Carefully, I doused the outside of the slider with cleaning fluid and gently rubbed it in to the particularly sticky spots, letting it dry. Next, I carefully lifted the slider so I could get underneath it. Be careful not to bend it too far or it won't lie flat anymore, causing it to stick in the disk drive. It could also spring completely off.

Now that I could get under the slider, I proceeded to douse the underside of the slider and the surface area of the cover which the slider moves over with cleaning fluid – release the slide and try moving it back and forth a number of times, and keep adding more cleaning fluid until the slider starts to move freely. It may take quite a few minutes to get rid of all the sticky coffee residue, so be patient.

The next nail-biting step was to tackle the coffee which was actually on the magnetic surface of the delicate disk inside the casing. The first thing to remember is to never touch the magnetic media with anything that can scratch the surface – you can't get rid of a scratch.

Looking at the spots of sticky coffee on the magnetic surface of my expensive LightWave disks made me cringe at this point. So, with trembling hand, I started to put drops of cleaning fluid on the disk surface, rotating the disk as I did so. You will probably notice that the cleaning fluid quickly spreads across the surface.

I then began to turn the disk using a pen on the round metal hub at the back of the floppy disk. Inside all floppy disk cases is a layer of soft white fabric which, I presume, helps keep the surface clean. This helps clean up the cleaning fluid (and hopefully the coffee stains too) as the disk rotates. Keep doing this until the cleaning fluid has dried and there don't seem to be any coffee stains in sight.

Eventually, you should end up with a much cleaner disk. The next step is to find out whether it still works. At this point, I must point out that there is a risk that any coffee residue still on the disks will probably find its way onto your floppy disk drives heads. The risk is yours and will depend on how desperate you are to retrieve your disks, so keep that disk drive cleaning kit handy.

You should now dig out your best disk copier and, making sure the verify option is enabled, proceed to back up your disks. During this process, you will soon find out whether there are problems with your disks because the copier will probably display errors.

However, if you are lucky, the disk will copy without problems and you can then try and use any programs or data using the backups. In my case, I simply ran the LightWave installation process to a temporary partition to see if it worked.

And it worked perfectly indeed. Frankly, I was pleasantly surprised and would not recommend this process unless the data you are trying to save is worth the risk of mucking up your disk drives heads. I would guess, though, that any liquid finding its way onto the heads will easily be cleaned with a cleaning kit, and replacement disk drives are quite cheap anyway.

Certain things this incident has taught me is that there is hope of rescue should this unhappy state of affairs re-occur, that floppy disks are best kept in floppy disk cases, coffee best kept in the mug, and always to make backups. So invest in a good quality disk box and take extra care when drinking at your computer. The end.

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News from the

'Information Access.' These are the key words to the '90s representing a global change in thinking about how we get the knowledge we need.

As the Internet swells with thousands of new users everyday, the media have hailed the dawn of a new era in which everyone can create a page that can then be read by anyone else, anywhere else in the world.

The paper publishers have been keen to jump on the bandwagon, and the gravity of this cultural change has become many a magazine's pet subject. Much has been claimed on behalf of the Internet, with some writers arguing it represents the biggest evolutionary step for publishing since William Caxton set up his first press in 1471.

They may well be proven right. Until recently, however, the net has lacked the content and style necessary to attract the average person used to the slick presentation of news and features they get from mainstream media. The amount of information available was always vast, but finding high quality material of interest to anyone other than academics or computer buffs could be like trying to find the proverbial needle in a haystack.

Things are changing, though, with major newspapers and magazines all over the world staking out their claims on the Internet. From Time magazine to the New York Times, the huge monoliths of traditional publishing are creating mirror entities in cyberspace, and already the standard of news and information coverage for net users is on the rise.

GRAND OPENING

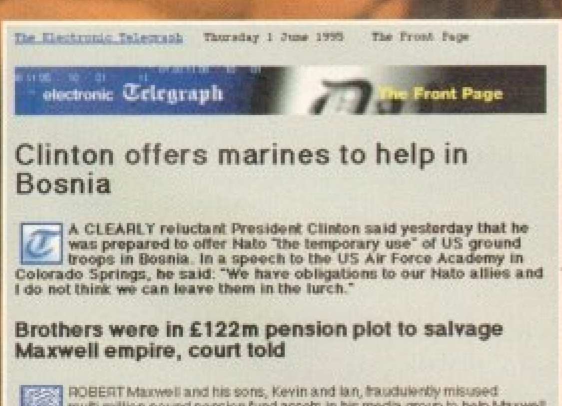
The event that marked the significance of the net to commercial publishers in the UK, however, was the opening of The Electronic Telegraph's site on the 15 November, 1994. The fact that such a powerful and respected force in publishing had taken this step was enough to make competitors sit up and take electronic services seriously.

Having been in existence for less than a year, The Electronic Telegraph (ET) is a new-born babe in comparison to its traditional sibling. On the new frontier of electronic publishing, however, it's already looked up to as something of a veteran. A criticism justifiably levelled at many net sites established by commercial publishers is that they serve merely as tasters to sell subscriptions for the original product. But from the outset, ET's editorial team had much higher ambitions. Hugo Drayton, Marketing Manager responsible for the net version of the newspaper, was keen to emphasise ET's independence.

"It's very definitely separate," Drayton asserted. "To us it's a different brand targeted at people who generally wouldn't read a broadsheet Monday to Friday." To reinforce this claim, Drayton pointed to the market research they're currently conducting which suggests ET is indeed reaching an audience that would not normally read the Daily Telegraph. And with 90,000 registered users there can be no doubt about the site's popularity.

Currently, ET is a completely free site, but as a commercial publication the long-term aim is to make a profit. Quite how a paper like ET is going to achieve this remains uncertain in these





The Electronic Telegraph Thursday 1 June 1995 The Front Page

electronic Telegraph — The Front Page

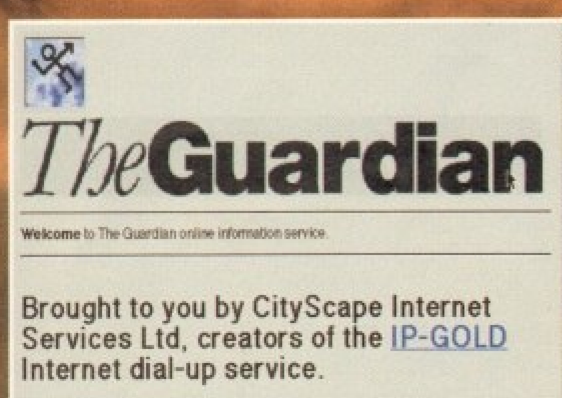
Clinton offers marines to help in Bosnia

A CLEARLY reluctant President Clinton said yesterday that he was prepared to offer Nato "the temporary use" of US ground troops in Bosnia. In a speech to the US Air Force Academy in Colorado Springs, he said: "We have obligations to our Nato allies and I do not think we can leave them in the lurch."

Brothers were in £122m pension plot to salvage Maxwell empire, court told

ROBERT Maxwell and his sons, Kevin and Ian, fraudulently misused multi-million-pound pension fund assets in his media group to help Maxwell companies facing a debt crisis, it was alleged yesterday.

The front page features the main stories of the day, but pictures are scaled down to thumbnail previews to save loading time



The Guardian

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At the other end of the broadsheet political spectrum, the on-line Guardian has arrived but has some catching up to do



Welcome

Mercury Center web

An information service of the San Jose Mercury News

Last updated Thursday, June 1 at 10:08 AM PDT. Click for Help or Main Menu.

hyperlinks | What's New | FAQ | Getting Ahead | Money Tree | Clippings |

Path cleared for California's first nuclear waste dump

The San Jose Mercury News, an innovative Web paper that's introduced subscription charges for the full service. The ET is monitoring their success closely

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early days, especially since commercial interests aren't automatically compatible with the free communal nature of the Internet.

"Our view at the moment is that we're in the business of building a readership and we don't think we can charge people to come in and read the news headlines," says Drayton. "Where we think we're going to make our money in the long term is through advertising or through value-added services."

This second idea hints at a multi-levelled site at which the basic news is free but where other services carry a charge. Drayton explained: "We could give someone something they actually want, like in-depth sports or financial information. Or it could be that we e-mail them information relevant to a subject they want on a regular basis."

Whatever charged services do eventually appear, however, Drayton acknowledged that most of ET's profits would have to be sought elsewhere. "We've seen in the newspaper chop-down-tree world that we're involved in a price war that doesn't look like ending, and in order to remain profitable and give our readers high-quality information we need to be getting money from new revenue services."

He continued: "Longer, longer term we don't want to be giving stuff away free. But the way things are looking at the moment, advertising is the most probable way of sustaining a decent product."

The prospect of having a paper which is mainly paid for by the advertisers is obviously good news for the readership, but advertising on the 'net presents its own separate set of problems that have to be overcome. Once the novelty of net ads die down, for example, what's going to make people visiting an advertising site spend money? And how are publishers going to incorporate adverts into their products without overburdening web pages with time-consuming graphics ?

Drayton argues that they'll either have to be very funny or full of worthwhile information. He points to the Barclays' advert, fresh on ET that same day, as a good example of the latter approach. In the future, however, it seems that electronic publishing will require a

News in a flash

Transfer speed is arguably the biggest technical problem faced by electronic publications at present. Considering we're all used to large glossy photographs and designs in traditional papers and magazines, it's not surprising if Web sites can seem painfully slow to plough through.

Commonly referred to as 'the bandwidth problem', the delay in the amount of time it takes to get a desired page on screen is going to have to be overcome before Web publications can become part of the everyday home. What makes matters worse is that the more attractive the product, the longer it takes to read thanks to the fact it probably has more memory consuming graphics.

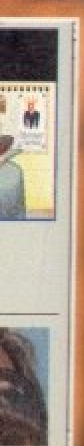
Publishers are therefore hoping for increased transfer speeds, so when ISDN, a digital network, replaces the analogue network that most Internet users are connected to, there should be an improvement and expansion in the services available.

In the meantime, publishers are having to balance graphics against downloading times, so the best products are giving thumbnail previews of photographs and images.

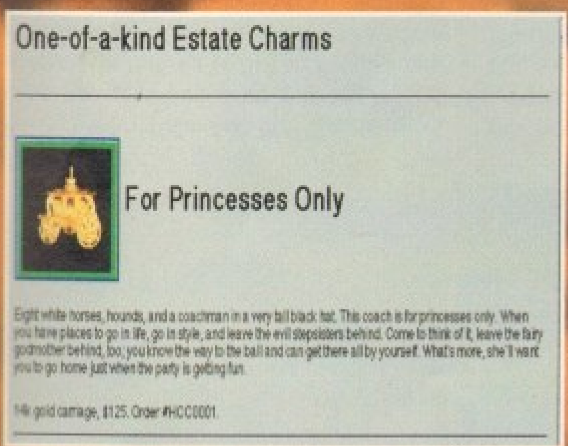


e frontier

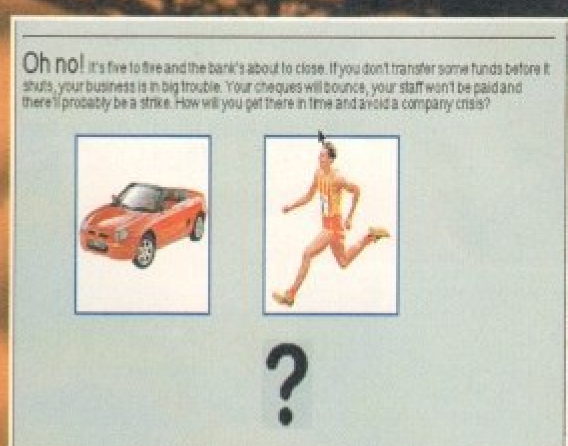
As serious media moguls move in on the 'net, commercial electronic publishing is about to blossom into life. Gareth Lofthouse approached two major players to get their vision on the newspapers and magazines of the future



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Advertising American style – House of Charm on the Mercury News draws readers in with games and stories



The Telegraph bears a link to this advert for Barclays, featuring a rather limited interactive element



The range of commercial publishers entering the Web isn't just limited to highbrow products. Penthouse, unsurprisingly, is being overwhelmed with users

The future is here

The Web is currently being flooded with new newspaper and magazine sites every month, so by the time this article makes it into print a whole batch of new publications will have come on line. Here's just a taste of what's available at the time of writing:

The Guardian
http://www.gold.net/online/
Limited to Arts and Archives at the moment, it's likely that the Guardian's online presence will expand in the future.

The Electronic Telegraph
http://www.telegraph.co.uk
The first electronic broadsheet in the UK, ET is still leading the way

San Jose Mercury News
http://www.sjmercury.com/bizhtml
An excellent service that's charging subscriptions for full use – but rather heavy on the graphics

Time Out Net
http://www.timeout.co.uk
The new and improved on-line guide to what's hot in the city

Penthouse Magazine
http://www.penthousemag.com/
Soft porn makes it onto the 'net with a site that's heavily overburdened with traffic

Time Magazine
http://www.timeinc.com/time/magazine/magazine.html
The huge American weekly magazine increases its distribution via its Web sibling

➤

closer collaboration between publishers and advertisers, not to mention a more innovative approach to exploit the new medium's potential.

"We'll see a lot more advertising which is linked to editorial," says Drayton. "If we've done an article on a trip abroad we could make a link to a company that could book you a ticket. It's not necessarily advertorial but advertising which relates to what you're talking about, so that people aren't having stuff thrust down their face, but there's information available if you want it."



Despite the challenges of setting up a major electronic newspaper and making it profitable, Drayton insists it's a worthwhile venture. He cites immediate worldwide distribution with reduced costs, and ease of access for those working with computers, as just two major advantages of electronic publishing over the traditional method.

He also believes electronic publishing presents no threat to traditional publications' sales for the moment, partly because people will always want the lightweight portability of papers and magazines. On the other hand, he refutes the argument that the traditional paper is easier for a reader to browse through and select what they want. "People who are used to using on-line services actually find ET just as convenient," he contends. "Articles are given the same weight in terms of space and you can cruise inside things you want to read in more depth."

With new readers joining up everyday, the confidence at ET so far seems justified, but even this high profile 'net service is having to cope with its fair share of teething problems. Most recently, the introduction of a new password registration system pushed ET's computers to the limit. This meant even those registered previously couldn't get on to the site and the whole situation became, in Drayton's words, a bit touch and go. "I was a bit uncomfortable for a couple of days," he later confessed.

In comparison to most electronic publications appearing on the 'net, however, ET has a wealth of on-line experience behind it. By contrast Time Out Net, offspring of the best-selling city-listings magazine, is still very much in its infancy. Despite being only a few weeks old, however, there's an air of professionalism in Time Out's Web pages that bodes well for the future. Offering features, information and events listings with guides for seven European cities, the site boasts an appealing layout and has already been praised as one of the best on-line publications by the specialist press.

Time Out Net's early success, far from being a matter of chance, however, is owed largely to the fact that the editorial team have identified and avoided flaws present in the majority of web sites.

"Everyone wants to get their toe in the water," said editor Matthew Collin. "But we really felt we had to offer some sort of solid content rather than just a glorified advert for Time Out. Most people have got over last year's 'World Wide Web, isn't it wonderful' buzz, and this year it's going to be all about content."

The team is also aware that people are expecting something new from web publications, rather than just an on-screen version of what's been available in print for decades. Collin is already looking at ways of combining the best features of printed news and broadcast news, reasoning: "Things like video or audio clips as back ups to features and listing material could really enhance the service. We're definitely thinking about including music clips, for instance."

As is often the case in computing, however, ambitions for the future reveal the technological limitations of the present. "People want to see things that look good and are well designed," says Collin. "But that has to be balanced against the problems of delivery speed. At the moment, because of technical limitations, people aren't getting information on-screen as fast as they'd like."

And learning how best to use and improve the technology is just one of the challenges that electronic magazines have to face. The electronic publishers are currently just feeling their way into a new market, and what Internet users are going to want now and in the future is still a matter of uncertainty.

An issue that they'll certainly have to face arises from the international dimensions of the Internet. Publications like ET and Time Out Net have been set up by national publishers, yet their net products are open to access from all around the world. ET, for example, gets 35 per cent of its readership from abroad, some of which are expats but many others are Americans or English-speaking Europeans.

INTERNATIONAL STATUS

Time Out Net has a similarly international readership, and Matthew Collin agreed that some publishers are going to have to adapt to expand into the bigger picture. "There are a lot of sites that are very localised," he said. "But yes, if you're a commercial site you need accessors from the States because that's the biggest area, so you have to take a look at what the Americans are going to make of your product."

The message is clear then: Publishing on the Web is a whole new ball game. Some of the net publishers may have decades of experience with traditional print behind them, but on the new frontier represented by the Internet, everyone's just learning the basics.

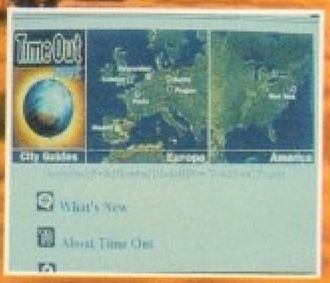
So what about the future, you may well ask? Is it possible that Web publications will be able to borrow the best assets of both printed and broadcast information services?

There doesn't seem to be any reason why not. TV broadcasting has the impact of film footage with sound but the viewers can't choose which stories to watch and which ones to ignore. Newspapers and magazines, on the other hand, allow readers to browse and focus on the stories that appeal to them, but at times a thousand words can't replace a brief video clip.

For the moment, though, the paper and print publications don't have too much to fear from their on-line counterparts. In fact, the electronic publishers are honest enough to admit that nothing is certain in these early days. "It's like so many of these things," Collin admits. "No one really knows:" AC



The contents of the Electronic Telegraph, including the hyperlink to Barclays' advert



Time Out Net includes guides to seven European cities, plus information unavailable in the traditional version

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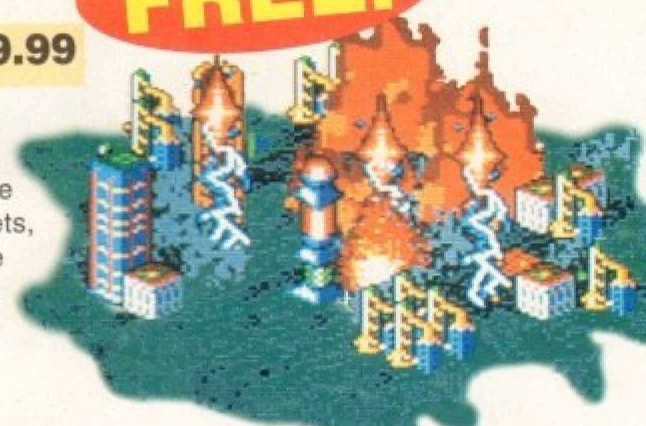
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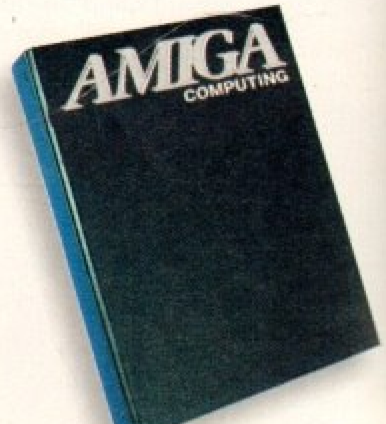
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laser guidance

Light Rom 2

Reviewed back in issue 85, the first Light Rom collection gained the distinction of being the only CD (and indeed one of the only products in general) to receive full marks in almost every category. Compiled by Michael Meshew, the high standard of objects on show and the accessibility of the CD placed it head and shoulders above rival offerings for 3D modellers.

Now, the collection has been updated in an attempt to improve on the original, and once again Light Rom 2 is pitched purely at the Lightwave/Toaster market – which is more the pity for Imagine users.

For those who didn't get the first disc, what makes the series so appealing to use is the fact that all objects are catalogued with thumbnail renderings, allowing for instant previewing. This is much better than having to search the disc by loading each object into LightWave.

Part of the 300Mbs of new material should please Toaster users thanks to the inclusion of new wipes and a range of CG fonts. Everyone, however, will benefit from the expanded textures drawer which now features a collection of Kevin Lude's backgrounds, all of which were originally only available commercially.

As usual, the compiler has added some handy utilities to help buyers make the most of the CD, including Show Object, a program which allows for the viewing of LightWave objects in Directory Opus or even on Workbench. Since this program has a facility for simple wire frame manipulation of the object, it's another feature which allows for speedy 3D previewing.

Those who wish to create animated titles for their LightWave animations should also take a look at Bluff Titler. This useful freebie allows for the manipulation of text, with explode/implode effects and the ability to overlay text on video being just a few of this gem's simple, fun features. Thankfully, there's a PAL version too.

Otherwise, this update has maintained the quality control of the original and has expanded in some useful areas. With such high standards at such a reasonable price, this series looks set to stay the ultimate LighWave CD tool for a long time to come.

The bottom line

Product: Light Rom 2
Supplier: PD Soft
Tel: 01702 466933
Price: £39.99

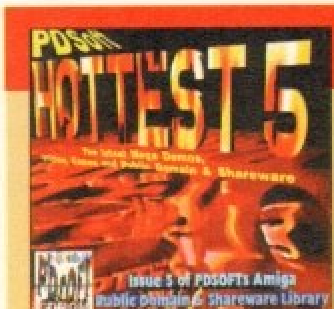
Ease of use	9
Implementation	9
Value for money	10
Overall	9

Here's a double CD collection we were looking forward to receiving – the idea of including a library of sounds and images in the same package could well have proved an excellent CD tool for those looking to save money.

Sadly, however, this 1000Mb compilation proves to be rather disappointing. For starters, the Graphic Workshop



Hottest 5



Miscellaneous CD collections are deservedly popular because by virtue of their sheer size alone, the buyer is guaranteed to find at least a few truly useful or interesting files. However, the market is already flooded with this type of product, so the Hottest 5 needs to be good to make a mark.

Fortunately, it appears to target a slightly different audience than the unbeatable Aminet CDs. Whereas the latter emphasise serious utilities and programs, the Hottest collection tries to balance serious computing with a healthy selection of games and demos.

On the serious side, there's Hard Utilities 2000 which includes tecchie yet invaluable programs like ABackup, a decent PD back up system, and Virus Checker v.6.29, a powerful though not quite up-to-date version of the excellent virus killer. There's also the latest version of SnoopDOS, a program which will log all DOS/library calls and more when a program is run. This is useful for locating problems, and with the addition of an improved interface it stands out as a highlight in the collection.

Other items in the pick and mix collection include Toaster textures by Thomas Dawson, the cheep but cheerful graphic converter Image Studio, and a number of educational programs like the A to Z Paint Pad. There's at least as much fun material for more lighthearted moments, however, with a number of bizarre games (like Roachfarm) and animated demos such as The Life of Mr. Pissoff. Unfortunately, this reasonably good selection is let down by the common CD problem of poor organisation. Finding the more interesting material is nowhere near as user-friendly a process as it is with the Aminet collection. It's true that a booklet is included which summarises the disc's contents, but this doesn't seem to work as well as CDs which include proper AmigaGuides. Despite these shortfallings, though, Hottest 5 is still worth a look for those who want a bit of everything.

The bottom line

Product: Hottest 5
Supplier: PD Soft
Tel: 01702 466933
Price: £19.99

Ease of use	5
Implementation	7
Value for money	7
Overall	7

The Sound Library and Graphics Work Shop

turns out to be rather a misleading name, because the focus of the product is almost exclusively on the audio side of things. As far as graphics are concerned, there appear to be a number of utilities, many of which are easily available elsewhere anyway.

Even if you ignore this fact and assess the product just as a sound collection, however, there are still a number of serious flaws. Most serious of these is the almost complete lack of organisation of sound files into easy-to-use groups. Basically, the only sub-divisions are between samples and modules. From there on, finding the type of sound required is nothing more than hit and miss searching through thousands of files incongruously thrown together.

Admittedly, it would take a lot of work on someone's behalf, but categorising sounds into basic drawers like 'Special Effects', ' House Music', and 'Metal' is vital if a compilation like this is going to be of use to most people.

In fairness, the samples and mods on offer are better in terms of quality than some of the other sound libraries available, and dipping into a collection like this is always fun. Plenty of silly samples, for example, can be found for novelty purposes – Porky Pig's evil laugh turned out to be a popular sample to accompany error messages in the office. It's also good to see an impressive range of tools included such as the latest versions of Sound Tracker, Pro Tracker, MED and a number of rippers. What's more, there's no complaining about quantities of material, as both CDs are choc full.

Nevertheless, The Sound Library and Graphics Workshop only warrants a very lukewarm recommendation. It's no worse than many of its rivals, but with a bit of organisation it could have been so much better.

The bottom line

Product: The Sound Library and Graphics Workshop.
Supplier: PD Soft
Tel: 01702 466933
Price: £19.99

Ease of use	**4**
Implementation	**6**
Value for money	**7**
Overall	**6**

This month sees the update of the best 3D CD collection yet released for the Amiga. Gareth Lofthouse tests it for improvements and reviews a host of other handy discs

Graphics Sensation



Another collection of mainly PD 3D objects, Graphic Sensations is not short of material for both Imagine and LightWave. What's more, in contrast to many of the CDs this month, everything has been grouped and subdivided into easily manageable categories.

Predictably, a lot of the objects have been seen before. Objects such as the Viewpoint hammerhead shark and chevy, for example, turn up on just about every 3D collection available, so this CD is only heartily recommended to those who haven't bought an object collection up to this point.

Categories covered include anatomy, gears and video for Imagine, and holidays, aviation and environment for LightWave, which at least means it's not all Babylon 5 and Star Trek rip offs.

A few animations have also been added including the 5.7Mb Jumpgate – which for some reason only appeared in grey scale when we viewed it – and the Space Animation by Samuel Rees.

More bizarrely, however, there's also a directory full of Amiga Comms tools like NComm and Term. How these made their way onto a graphics CD I'm not sure, but it seems that sometimes compilers will stick anything on a disc to pad out the space. If they had to fill gaps, however, a few more animations wouldn't have gone amiss instead.

Those requiring backgrounds will go to the texture drawer, though many of them seem of only mediocre quality when compared to some examples on the Textures CD also reviewed. All the same, as part of the general collection they a worthwhile extra.

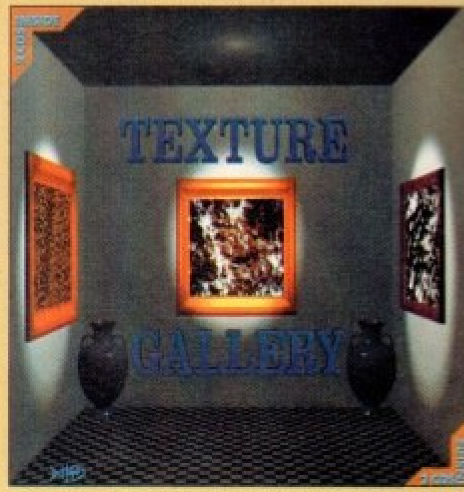
There's nothing particularly fresh or outstanding about Graphics Sensation, but it does represent good value for anyone who hasn't bought a 3D collection previously.

The bottom line

Product: Graphic Sensations
Supplier: Epic
Tel: 01793 490988
Price: £19.99

Ease of use	**8**
Implementation	**6**
Value for money	**8**
Overall	**7**

Texture Gallery



It seems that textures are thrown in to pad out almost every new CD put on the market, but for anyone who finds them regularly useful in their work, here's a CD that concentrates exclusively in this field.

The good news is it's another fish image collection done in the style of the Light Rom series, which means thumbnail images which allow for easy previewing of all the pictures on the CD. Flicking through this catalogue gives a good impression of the wide variety of texture types available.

Simple brick backgrounds may not be fascinating in themselves but they're always useful for a wide range of applications, and even these basic pictures have an air of quality with reasonably professional lighting.

There are also backdrops which have obviously been designed with presentations in mind. The Brownbox or Diamond IFFs, for example, would make good backgrounds for bullet points and text.

One complaint must be aimed at the claim that this is a huge double-CD collection. The thing is, when you actually look at the CD it becomes clear that so much space has been taken up because the same images have been converted across six formats. How many Amiga users are going to find SGI format textures handy ?

Otherwise, it's a good quality and highly usable CD, though how many people are going to pay this price just for backgrounds remains to be seen.

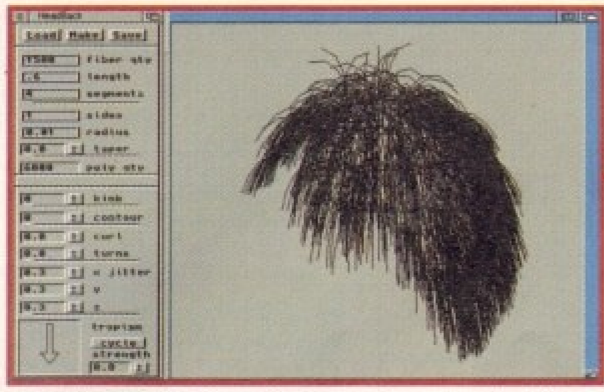
The bottom line

Product: Textures Gallery
Supplier: PD Soft
Tel: 01702 466933
Price: £39.99

Ease of use	**9**
Implementation	**8**
Value for money	**7**
Overall	**8**

3D fur for all

Paul Austin explores LightWave's ultimate organic add-on



A simple interface controlling incredibly powerful software – if only all packages adopted a similar approach



A mixture of fibre styles, short on the forehead and long down the back

On the rush for 3D believability there's always a 'what if' feature beyond the reach of just about every package. Until the release of Lightwave 4.0, kinematics was the de facto stalking-horse, constantly dragged from the stable when anyone felt the need to give Lightwave a good kicking.

Thanks to the arrival of Fiber Factory, another seemingly insurmountable 3D problem has been solved. Courtesy of a beautifully simple stand-alone interface, the complexities of handling huge numbers of individual fibres is down to a simple point and click procedure.

The only thing you need to create any kind of hairy incarnation is an existing LightWave object. After loading an object the software uses it as a template from which the fibres grow. Assuming you've loaded a sphere into the software, the effect would apply to the entire surface – creating a tribble or pom-pom.

If you only want to add a toupee to your sphere, you could simply go into modeller, copy the area in question, paste it into another layer, save it, and then load this in as your object. If you then regenerated the hair, saved the resulting model, and loaded this into modeller, your follically-challenged sphere would now have a luxurious head of hair.

SPECIFICS

This ability to dissect a model and add fibres to a specific area, and in a specific style, is an incredibly powerful means of combining styles on the same object. Adding a moustache to the same sphere would simply mean copying the appropriate area and defining a shorter and rougher look for those fibres. Better still, when the software generates fibres it doesn't retain the existing model – only the actual fibres or wig make up the new hairy object.

As a result, when the fibres combine with their original template object there's no risk of rendering errors or unnecessary polygons. The new wig simply fits perfectly onto the area or object you used to create it.

As you see from the interface screen shot, Fiber Factory is reassuringly simple. In short, you simple load the object, adjust the settings and click on the make button. If you discover a fibre style you're likely to want to apply on future projects, you can save and reload it for use on another object as required. Okay, the load, save and make buttons are pretty self explanatory. Following these comes the hair qty setting, which not surprisingly defines the number of fibres to be generated. Next up comes the length option, which as you'd expect is expressed in meters. Just below awaits the all-important segments option – if you want your fibres to bend they must have sufficient segments to make the effect believable.

The following sub-section defines the style of the individual fibres. If you set the sides option to one, you end up with a single two-point polygon – great for basic cost-effective fur. However, such two-point polygons do lack specularity and shading.

Raising the figure generates a traditional polygon model for each fibre, and by varying the amount and adjusting the radius can create anything from flat strips to cylinders. Add definable tapering and you can extrude every fibre to a sharp or soft point.



An impressive object, but you've got to keep an eye on the polygon count

STYLING

The Polygon qty figure shows the total number of polygons that will be generated using the present settings. Next comes the all-important styling section with kink adding a crinkled or accordion effect to the fibres.

Contour offers a means of laying the fibres down on the surface of the polygons to a user-definable degree, thereby creating the sleek rather than spiky look you'd require when modelling a smooth fur-covered creature. Curl, not surprisingly, does just what you'd expect, with 1 producing a single loop, while the turns define how tightly the curl should be wound.

Jitter offers a means of randomising the directional variation in relation to the templates surface, the end result being a definable amount of messiness. Last of all comes the truly stunning Tropism control which defines the amount of bend or droop applied to the fibres – an affect which might be caused by light, wind or, more often, gravity.

Combine this with a sufficient number of segments and fibre styles and you can generate beautifully soft organic shapes. And of course the degree of bend is totally user definable, in terms of both weight and direction.

The final icing on the cake is the affect morphing has on the Fiber Factor concept. Because the number of fibres, points and polygons remain the same, morphing between two revisions of the same object can lead to amazing animation, regardless of the effects applied to them.

Plants and vegetation could blow in the breeze or turn to the light, hair could stand on end or bounce along as a character strides across the scene. To quote the manual: "the possibilities are endless."

Any questions?

As for faults, there's little to complain about. The only real irritation is that the preview screen only generates single strands to denote the length and style of the fibres. As a result, you're often forced to load your creations into LightWave and do a test render to get a real idea of how the fibres and designs actually look.

On the plus side, the interface does have complete control over the angle of view, either via hotkeys or mouse-controlled freehand rotation.

The bottom line

Product: Fiber Factory
Supplier: CyberSystems
Tel: 01843 292150
Price: £99.95

Ease of use	**10**
Implementation	**10**
Value for money	**7**
Overall	**8**

DTP dilemmas

When can a word processor become a maths package? Nik Lines finds out as he looks at the many solutions for creating visually pleasing formulae

There comes a time in everybody's life when, despite their best efforts to avoid such a thing, they find themselves needing to do something horrendous such as producing a (dare I say it) graph or, even worse, a mathematical formula.

The Amiga, despite having excellent DTP and document processing packages, is rather devoid of this sort of tool. So what options are there available to the frustrated user?

Well, a simple bar chart – or histogram – can be knocked up in a suitable paint package; however, it is a shame when you've got a 300 DPI printer sitting on your desk to print out a graphic that was designed for display on a 70 (ish) DPI monitor. Saying this, you'll be fine as long as you don't need any lines which aren't horizontal or vertical.

What about a pie chart? The mathematically minded could convert an angle to a co-ordinate on a circle, but what if you haven't got the time or inclination to do this? There's a fair whack of processing power at your fingertips and you'll be reduced to using it as a calculator. Shame really. As for presenting three dimensional data, such as sales of different items over a set of months – euurgh. Practically impossible to do manually.

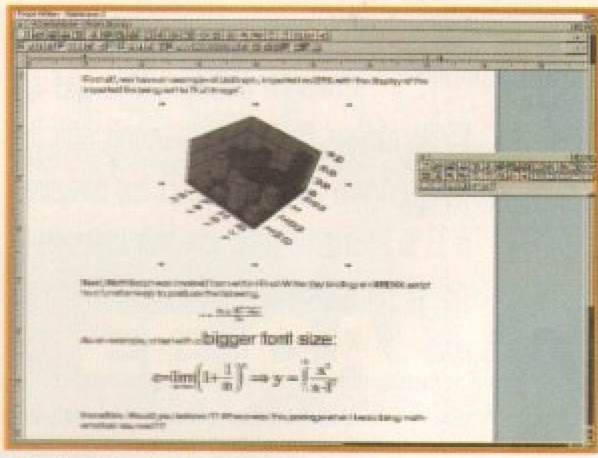
Worse still is entering a mathematical equation. Consider the solution of a quadratic equation:

```
x = (-b (+ or -) sqrt(b² - 4AC) / 2A)
```

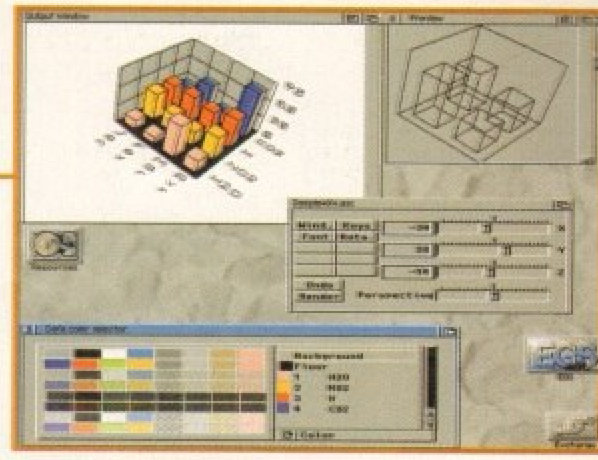
It looks a lot better when presented in its original form. The paint package of your choice could be the only way out, or you could try and draw something with a DTP package which would (and I speak from experience here) look like the cat had done something unsavoury on your page.

It's depressing to go and use Word on a PC – these things are built in! As good as Final Writer or WordWorth are, they are still missing these things. However, there are cheap – nay free – solutions thanks to the Amiga's superlative public domain and shareware fraternity and, in the politically correct '90s, sorority.

Firstly, you should decide what you want to do with the data – preferably use a graph format and save the graph as an IFF DR2D (IFF's structured drawing format) or EPS (Encapsulated PostScript) file. The choice you use will be dictated by your package – PageStream likes IFF DR2D if you're printing on a non-postscript printer, whereas Final Writer likes EPS for anything.



Final writer showing the results of JCGraph and MathScript



JcGraph, with its multiple window approach, is pretty good if a bit buggy

There are quite a few packages that claim to do this sort of thing. However, the best and most flexible I have found are JcGraph and AGraph which are both PD and, curiously enough, both written by Francophonic authors – JCGraph is from Canada and AGraph comes from France. I have yet to draw conclusions from this observation.

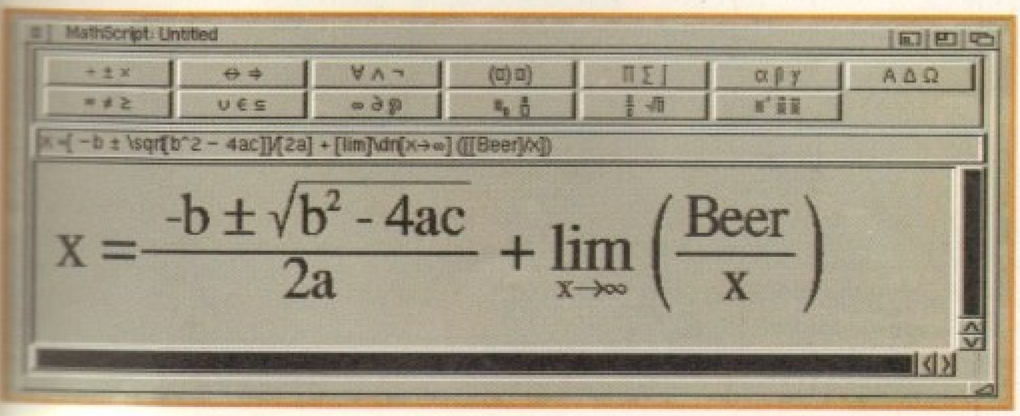
AGraph has only recently been written by Denis Gounelle and produces a variety of graphs – including Histogram and pie chart – which are output as IFF bitmaps corresponding to the size of the window. Data is read from a text file which gives information on the sort of graph to draw, number of colours to use and the actual data to display. The manual, which is provided in both English and French, gives a lot of good, easy-to-read information on how to produce a data file, and the format of the file is sensible and easy to remember.

One thing that would be exceptionally useful for this package would be an option to specify the pixel size of the output. Who knows – the author may include it in the next version.

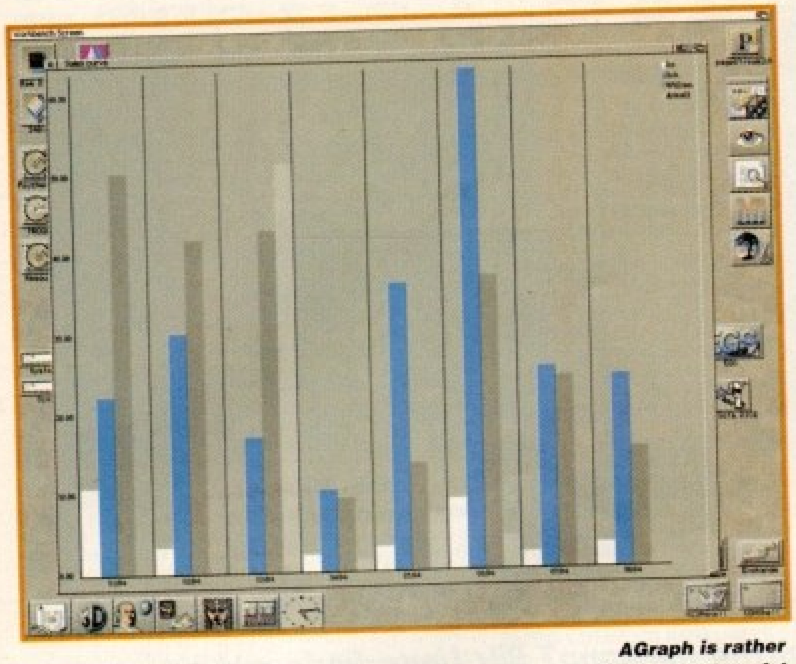
The most feature-packed software I found for displaying data was the JCGraph package. Flexibility is paramount with this package; graphs can be made in 13 two dimensional or 13 3D formats, colours or grey scale values can be set, as can labelling size, and oodles more. The resulting graph can be saved in DR2D, ILBM, EPSF (grey or colour), GEO or DRAW2000 format – at least one of those should work with the package of your choice.

Again, data is written into a text file then loaded into the package. There are a couple of bijou quirkettes in the data format, however. For example, the number 1003 must start off every data file for JCGraph. Why not the word JCGraph? Who knows. Following this is the size of the data array which specifies the arrangement of data. Four values plotted over 12 months would be a 4 x 12 array, requiring 48 data entries.

Another strange aspect that manifests ➤



MathScript really is pretty good. And this is its window



AGraph is rather limited, but useful in some circumstances

itself is the 'cotation' scale and multiplier values that have to be in the data file. I seem to recall from my French that this is something to do with height, so I guess it's the height scale and multiplier. It's worth mentioning that the manual is again provided in French and English, but the English can be hazy at times.

After this, comes the actual data followed by the row – and column, if three dimensional – names. It's a bit of a fiddle to enter the data and the chances are that rows and columns will be entered in the wrong order for the first few tries, but eventually good results can be obtained.

Once the data file is prepared, this is loaded into the program. Then the type of graph required is selected from any one of 13 different types. The rotation of the graph, along with the perspective, can be changed through the use of sliders, and a preview window shows a sample of the graph type in the orientation you have selected.

ANY SIZE

Once everything is fine and dandy, click on the render button which will render the graph to fill the final output window no matter what its size. If the graph's appearance meets your requirements, you can save it in any one of the formats listed before to wherever takes your fancy.

The package has a complete ARexx port as well, should you wish to automate your graph creation. There's also a brief description of how to create your own graph types in case you want to make a completely different graph with whatever properties you require.

The author of JCGraph has, unfortunately, stopped developing the package which is a shame. There are a few bugs such as not liking more than 16 colours on screen, and the manual really could do with a few updates. However, for free I don't suppose we can complain but be thankful that it does what it does so well.

All in all, I reckon JCGraph is quite easy to use, feature packed and well thought out – certainly worth having in anyone's suite of document processing tools as you never know when you may just need it. And so we

> The most feature-packed software I found for displaying data was the JCGraph package. Flexibility is paramount with this package; graphs can be made in 13 two dimensional or 13 3D formats, colours or grey scale values can be set, as can labelling size, and oodles more

move swiftly on to the other frequently-met problem – how to insert something looking like a mathematical equation into your documents.

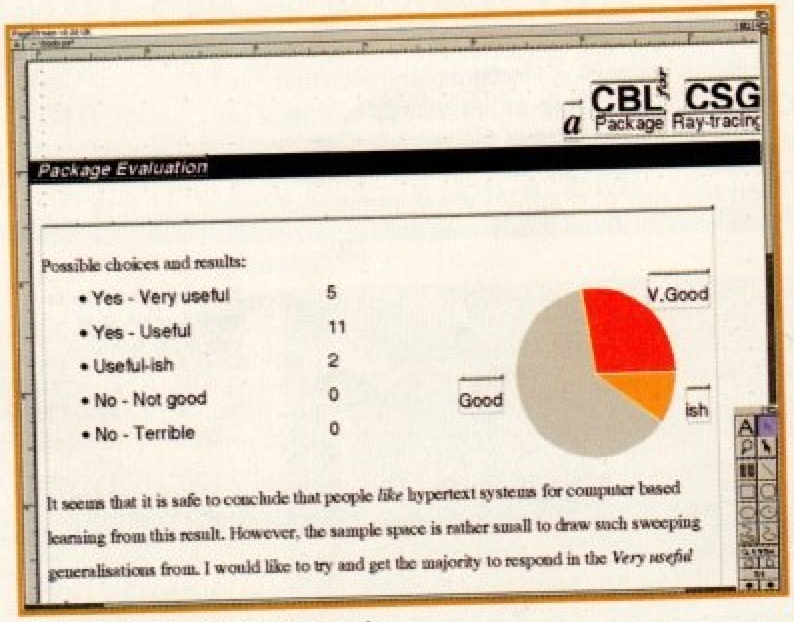
For quite a few years, a typesetting language called 'Tex' (pronounced tech for no adequately explained reason) has been available to perform this very task, and there is an Amiga port of the beast. However, it's not everyone's cup of tea because the term WYSIWYG was not heard of when the language was conceived – however, this doesn't detract from the power of the language. The whole idea of Tex is to abstract the formatting away from the user to produce good-looking, readable documents without having to worry about layout.

The Amiga version, called Pastex, is free and good. However, this is not really the solution most people will want, especially as many only want a quick equation now and then. AC

Many thanks

The two packages that have been looked at in depth here – JcGraph and MathScript – both add to the Amiga's DTP or document processing suite and will, for most people, be used at least once or twice.

With these two packages installed, there's no reason to change machine as they bring all the functionality you could need to the Amiga. A big hearty 'thank you' is deserved by the authors.



JCGraph was used to create the pie graphs used above in PageStream 2.22

What a stormer!

A few weeks ago, a package called MathScript version 2.0 was uploaded to Aminet by its author, Simon Ihmig. Curiosity got the better of me, and I downloaded. The first thing to say is that this package is a stormer! It really is excellent. The author appears to have produced the package for the reasons it was needed, and as an exercise in programming. It's difficult to get excited about this sort of thing but it really is that good.

However, I'll stop prevaricating about the bush and tell you what it actually does. Double-clicking on the package's icon gives a rather nice interface built using Magic User Interface, therefore allowing the look of the package to be completely altered, should the urge take you.

Residing at the top of the window is a bank of 13 buttons, each of which bring up a different array of symbols when clicked on. Below this is a simple string gadget and then the rest of the window is taken up by an innocuous looking frame with sliders on both sides. Mathematical equations are entered into the string gadget with special symbols taken from the banks of symbols, then the equation is previewed by clicking on the large frame.

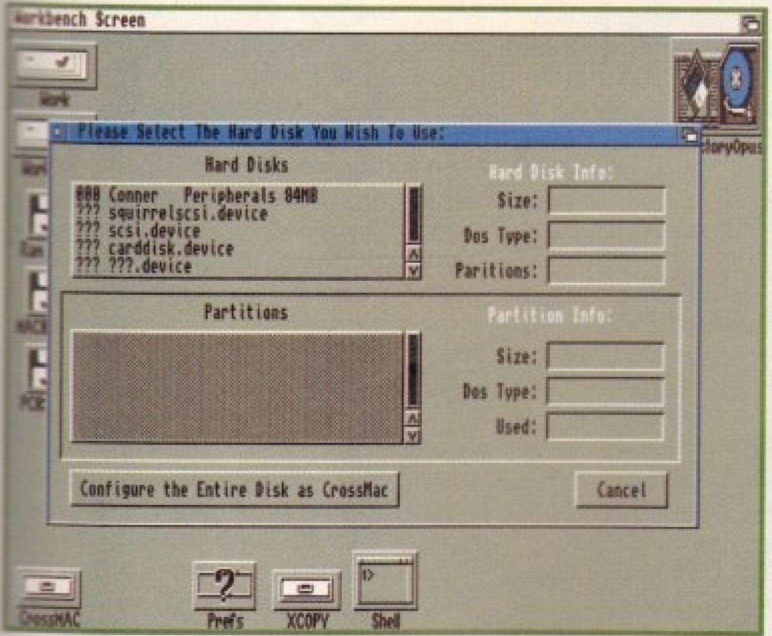
Superscript and subscript are catered for, as is all the necessary formatting I could rack my brains to think of – the size of the font used can also be set to whatever is required. Symbols include all standard Greek characters and more mathematical ones than my humble brain could recall.

Once happy with the previewed results, they can be saved as ILBM, postscript or encapsulated postscript. EPS has a bitmap of the results inside the file as well as the postscript information; with this format, Pagestream can be coaxed into printing the results on any printer.

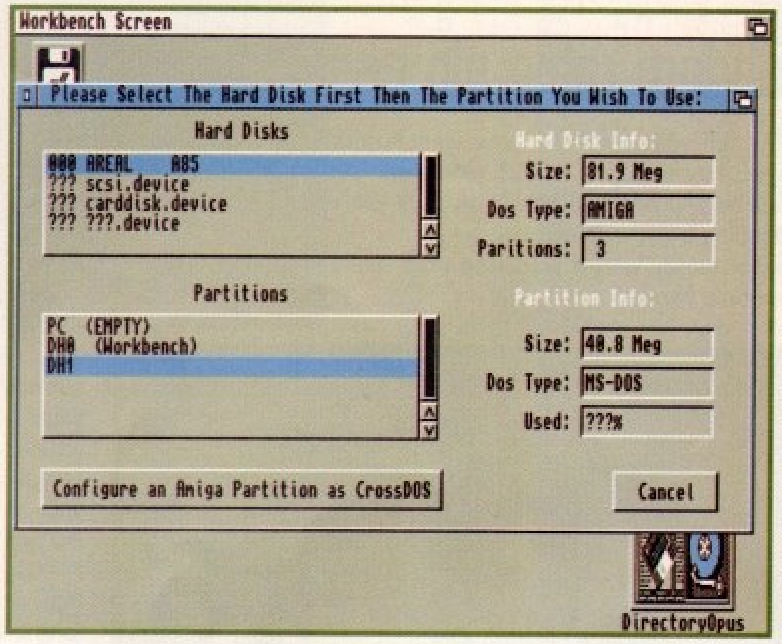
Final Writer is very much at home when dealing with EPS images, and the author provides full instructions to get the two packages behaving happily together – all that has to be done is remove a couple of comments from Final Writer's Postscript initialisation file.

The package has a full ARexx interface and comes with three ARexx scripts – one for the package and two for use in Final Writer – and all three automate the passing of formulae between the packages. InsertFormula is used from within MathScript to push the EPS result to Final Writer (using the size of the current font in Final Writer – a nice touch) whereas the other two open and close MathScript from within Final Writer. This addition to Final Writer makes it closer to how Word is for the PC – it's an excellent example of what the Amiga and ARexx can do.

Even if you don't have Final Writer, this is pretty much another 'must have.' It's excellently written and does the job it is supposed to do very well. The shareware fee is $15 and my only niggle is that this has to be sent to somewhere in Germany.



Any hard drives attached to your Amiga can be configured for use as either a 'real' Mac hard drive or a simulated one using CrossMac



Configuring a hard drive to share with your Amiga and PC is as easy as pointing and clicking your mouse thanks to crossDos Professional

Tricky transfers

Darren Evans looks at some low-cost methods of connecting your Amiga to other computers and some of the pitfalls to watch out for

More and more people are using computers at work and an increasing number of households have a personal computer. It's also true that in today's competitive working climate, more of us are working longer hours. It is therefore very advantageous to be able catch up on work by transferring work-related files from the office computer to your home machine.

The converse can also be true however, as some people often take advantage of computers and software at work to do tasks associated with their home computer. On the more leisurely side, it's useful for fellow Amiga addicts to be able to link their machines in order to share data. So, let's look at how you can connect your Amigas to other computers (and to each other) for relatively little or no cost at all.

Unfortunately, when you start thinking and operating in a cross computer manner, the question of compatibility arises. It is the major stumbling block most users will fall over when trying to work between different computers.

Until fairly recently, the only way around these problems was to invest in expensive hardware such as emulators or network cards. Now, with the advent of low-cost hardware, such as modems, and fairly recent software solutions, life is a lot simpler.

First though, let's explain some common problems which must be overcome. To start with there are two levels of compatibility problems which must be dealt with, the first of these being actual storage media compatibility. Different computers have different ways of storing information on disks. It may be that actual floppy disks are pretty much generic across nearly all machines (a 3.5 inch floppy can be used by any computer with a 3.5 inch floppy drive), but the way data is actually stored on such disks can be drastically different. By default, an Amiga can't read a Macintosh or PC formatted disk because each of these machines has its own file system. A file system describes the way in which tracks and sectors are written to a disk when it's formatted, and how files are stored and retrieved on these disks. So, your computer must understand how to read a different computer's disk before it can even find the file on it.

The second compatibility problem lies with the actual file being transferred. Say, for instance, you have a 3000 word document you have written with Microsoft Word on your Macintosh at work. When you save it to a floppy disk, Microsoft Word stores it in its own proprietary format, with various special commands embedded in the document file which signify such things as different fonts, font style (bold, italic) and other information.

ILLEGIBLE

If you were to transfer it to your Amiga word processor, the word processor must know how to read the Microsoft Word format file or you will get strange characters on the screen which would be about as legible as a legal document written in Latin by a dyslexic solicitor.

So, you have disk filing system and file format compatibility issues to consider before computers can talk to one another. The latter is the easiest to deal with, so I will expand on this first.

Thankfully, file format issues have been recognised by the computer industry and many file format standards have appeared over the years. For example, in the word processor market, there are a few universally understood file formats which nearly all word processors understand, such as ASCII (American Standard Computer Information Interchange). Nearly all word processors can save text files in this format and can thus be read by other word processors.

So, why do all word processors commonly have their own peculiar way of saving documents, why not just use ASCII all the time? The reason why this is not the case is that ASCII is a pretty old standard and is far too simple for today's requirements.

With today's powerful word processors you have the ability to include many different fonts, font styles and even graphics and tables within a document. Poor old ASCII doesn't know about these exotic elements. All it knows about are simple letters and numbers (with some simple control characters for line feeds, carriage return etc). The RTF (Rich Text Format) standard is more intelligent in that it knows about font styles such as bold and italic, and even graphics (depending on the application's implementation of RTF).

Thankfully, just getting the text content of a document is generally all that is required for the average user when transferring a word processor file to another computer.

There are still difficulties even between so-called ASCII file formats on different computers which treat end of line (EOL) and carriage returns and line feeds in different ways. ➤

Null modem cable pin assignment

Here are the pin assignments if you want to make your own null modem cable. You will need one 25-pin female D-Sub connector for the Amiga. The PC end will either be a 25-pin or a 9-pin female D-Sub depending on your PC model.

If you're not handy with a soldering iron, many computer stores stock null modem cables

25-pin	Signal	Signal	9-pin	25-pin
07	GND	GND	05	07
02	TD	RD	02	03
03	RD	TD	03	02
05	CTS	RTS	07	04
04	RTS	CTS	08	05
06	DSR	DTR	04	20
20	DTR	DSR	06	06

➤

Saving an Amiga ASCII text file and loading it into a Macintosh word processor will result in the actual text being loaded, but the layout will be terrible. Such problems do not occur if you use RTF.

Things are slightly less developed with regards to spreadsheets and databases. The only generic format which a few Amiga applications support is Comma Separated Values (CSV). One example is Twist 2, a database from HiSoft which happily accepts data stored in CSV format.

The graphics arena is probably the most developed area in terms of the sheer number of file formats – I can think of over ten graphic file formats off the top of my head. I would hazard a guess that relatively little difficulties will arise when trying to transfer graphic files between various computers and if it did, I would say it would be down to poor support or implementation on the part of the application.

Some of the most common graphics file formats include True Image File Format (TIFF), Targa (TGA) and Graphic Interchange Format (GIF). If your graphics application supports these, your life will probably be easier, if it doesn't, there are many graphics file format converters/image processors available both commercially (ADPro) and in the public domain (Image Studio) to help you out. So, when you are shopping for an Amiga application you think will help you with your work, be sure to check for file compatibility. Ask the person in charge of software installation at work about the file formats which the software you are using supports. Then, check your Amiga application supports a good range of various file formats. It's also worth a browse through public domain libraries.

Once you do have a particular file which you know your respective Amiga application can read and use, you still have to surmount the problem of getting it from one computer to the other. This is where the different file systems found on various computers rear their ugly heads in an attempt to thwart your efforts. Thankfully, there are solutions to the problem, both in hardware and software.

Essentially, all the Amiga requires is information about the other computer's disk structure and the way it stores files on the disk. One of the Amiga's great strengths is its ability to easily incorporate strange and alien filing systems via software drivers.

The Amiga and PC are already on relatively good speaking terms, if you have Workbench 2.1 or later that is. This is thanks to the small and clever driver called CrossDOS. CrossDOS allows your Amiga to read and write MS-DOS PC disks without the need for any hardware. This is really good news because it is common knowledge that the PC is the most popular computer to be found in both large and small businesses.

DRIVER ACTIVATION

To activate this driver, simply go into the Storage drawer on your boot partition, enter the DOSDrivers drawer and double-click on CrossDOS. You can also drag it into the DOSDrivers drawer in the Devs drawer so that it loads automatically at boot time.

However, Workbench's CrossDOS driver is only designed to work with floppy disk drives. If you want to access CD-Roms, hard drives or other high capacity devices, CrossDOS as it stands will not work.

It is possible to edit the CrossDOS driver file and supply it with further information about high capacity devices, but this requires a great deal of knowledge about the relevant device and file systems in general. Thankfully, there are commercial packages available which take away this burden and supply the user with all the tools required to use both floppy and high capacity devices across different computers with relative ease.

CrossDOS Professional, reviewed in the July issue of *Amiga Computing*, is an enhanced and much faster version of the Workbench CrossDOS, and as well as providing the ability to read and write MS-DOS floppy disks, it also makes connecting and configuring hard drives and other high capacity devices such as CD-Roms a breeze. It even allows you to mix MS-DOS and Amiga partitions on a single hard drive.

If you want to transfer files between a Mac and your Amiga, the makers of CrossDOS developed CrossMAC. Considering the complexity of the Apple disk filing system, CrossMAC does an admirable job with some restrictions for the Amiga owner. If your main aim is to transfer files via floppy only, you will need a 1.4Mb high density floppy drive because low density floppies are not supported.

On the hardware side, you have the option of using a modem to transfer files from your work computer to your home computer. Of course, this will require you to actually have a modem and terminal software such as Termite, or one of the many public domain terminal applications, not to mention the modem required at your workplace too.

Terminal software can also be used with a null modem cable to connect two machines together and transfer files as though they were actually connected via a modem. The advantage of this method, though, is that phone bills are not creeping ever higher during the transfer, and it's faster too. A null modem cable is a serial cable which has been re-wired slightly (see diagram for building your own null modem cable) and is available from all good computer stores. There are also a few commercial and PD utilities which utilise serial or parallel cables which often allow you to actually use drives connected on one computer as though they were connected to the other.

Link-It is one such commercially available utility, while in the public domain, there are programs like PC Amiga Transfer, which is on CoverDisk 2 of this very issue of *Amiga Computing* for you to try.

There are various emulators available in the public domain, but they tend to be a little too unstable and too complex to set up for my liking. AC

Fussy filenames and misconceptions

One extremely annoying problem to be aware of when transferring files between PCs and Amigas is the limit imposed by MS-DOS on the length of filenames.

MS-DOS filenames cannot be longer than eight characters with a three character extender. EXAMPLES.TIF, for instance, has the maximum letters for the main filename, with the last three letters after the period usually denoting filetype, in this case a TIFF graphics file. This is quite restrictive and doesn't make for clear and explanatory naming at all.

Now, our humble Amiga not only beats the pants off most PCs at multi-tasking, it is also much more versatile in terms of filenames. The Amiga quite happily accepts filenames up to 30 characters in length and herein lies a major problem. If you are transferring files from your Amiga to the PC, you have to always be aware never to use filenames longer than eight characters. If you do, you will probably end up overwriting previous files or get lots of duplicate file error messages.

As an illustration, consider the Amiga filename ANIMATION0000.TGA, which is the first frame of a 1500 frame animation with the last frame being ANIMATION1499.TGA.

If you were to transfer these files to, say, an MS-DOS partition on a hard disk, all the files will be unceremoniously chopped to ANIMATIO.N00, overwriting previously copied files which will have the same name and generally causing a major headache. It's easily avoided if you are the one creating the files, just use a name with less characters, but there are situations where long filenames from other sources will be cause for a tedious renaming session.

A common misconception among many novice users is the assumption that if the Amiga can read an MS-DOS formatted disk, any programs on there can be run on the Amiga. However, although there may be many files on a PC CD, such as pictures, fonts, audio samples and the like, any actual PC programs on the CD cannot be executed on the Amiga because these programs are written specifically for PC processors and hardware.

PC and Mac emulators are required to run such programs and these tend to be somewhat expensive.



Spirit of the Pharaoh
plus Seven Wonders of the Ancient World
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Spirit of the Pharaoh is an all action comic / graphic adventure produced to broadcast standard using Amiga hardware & software (including Real 3D V2, Lightwave, ImageFX, PAR). Also, included on the tape is Seven Wonders of the Ancient World - a fully animated 3D tour (modelled and animated in Lightwave and Real 3D V2).
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TCP hell

Ben Vost realises he doesn't know enough about TCP/IP stacks and protocols

It just makes you realise the amount of work the people at Demon, along with knowledgeable people who use Demon, put in to their AmiTCP installation. I can't emphasise enough how complicated setting up AmiTCP/IP 4.2 actually is. In fact, were it not for the fact that I already had a Demon account, I might well have given up on the whole enterprise. This is especially so seeing that the best fora for help are mailing NSDi themselves and the Usenet newsgroup comp.sys.amiga.networking, not to mention various mailing lists and FAQs, all of which are really only available to someone with a working installation of AmiTCP.

I will say it again, lest you didn't read my salutary warning: AmiTCP/IP v4.2 commercial is a pain to set up. And this is for someone who has AmiTCP v3.0b running quite nicely on their machine, thank you for asking.

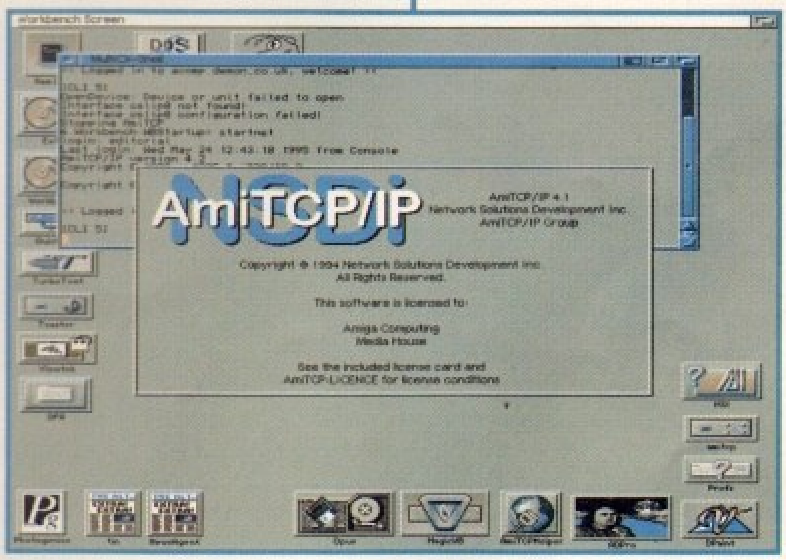
People who are coming straight to it from, say, Parnet, are in for a real shock. The problems start when you first look into the impressively dense manual. It rang warning bells in me when I opened it up, moved past the contents and a cursory introduction, and was looking straight at a section entitled 'The Internet Protocol Suite Tutorial.'

INTRODUCTIONS

This wasn't a tutorial on how to install AmiTCP, but an introduction to the OSI reference model, routing and subnet masks. Still with me? Good, because after you dealt with these topics you move right onto 'Data Flow on TCP/IP Networks', gateways, UDP, repeaters and bridges. Right, let's skip over that lot and get onto Chapter 3; Installation.

AmiTCP comes with not one, but two standard Commodore Installer scripts. The first creates the directories and copies the files needed by AmiTCP. AmiTCP recognises when you have already installed an earlier version of the networking software and asks you if you want to maintain your old configuration files.

Unfortunately, it does not make it clear that the only configuration files it can deal with successfully are those from AmiTCP v4 or later, so BANG! down goes your machine. RTFM, you might say, but there was nothing to prevent there being a message to tell you that this is the case when you get to the point where you have to make the decision. The second installer script is to be run once you have installed AmiTCP, and it allows you to configure your installation and change your IP address, Sana-II device, etc.



The only even vaguely interesting screenshot for this review

There is a definite lack of peripheral tools in the AmiTCP package. It comes with no e-mail or news system built-in and you can certainly forget about WWW or Gopher. It does, however, give recommendations to pick up copies of Elm, GRn and Mosaic.

AmiTCP doesn't come with a multi-user file system either, but this is understandable because the amount of configuration work you normally have to do with this sort of replacement file system would require another manual. Actually, in the early sections of the manual it warns you that the Amiga's native file system isn't very secure, but gives you no further advice on the topic.

Reading back over my copy, I feel I have been a little unfair to AmiTCP. It certainly is a nightmare if you are trying to configure the setup for use with an ISP, say Demon, for instance. But for use in an internal network with one or more Amigas and/or other machines connected together via ethernet cards, AmiTCP is a much simpler affair.

Your only problems come if you have set up your network so that it works fine at your end, but as soon as you connect to outside machines everything goes haywire. This is almost certainly your fault and the manual makes no bones about it. This is not solely a problem with AmiTCP.

> AmiTCP is a unix bod's dream, though, as most of the config files from a Unix box can be transferred as they are to your Amiga set-up

Internet-working is going to be a horrendously complicated process for some time to come and improvements are only going to be made in the presentation of configuration options and not the configurations themselves. AmiTCP is a unix bod's dream, though, as most of the config files from a Unix box can be transferred as they are to your Amiga set-up.

As for speed of operation, well, there are no noticeable differences between the version of AmiTCP you have to pay for, and the beta version 3 which is provided by Demon to access the Internet.

AmiTCP/IP v4.2 is a solid networking product working under the restrictions imposed upon it by the Amiga's operating system and file system (most importantly, a lack of security measures). However, it is certainly not a package that anyone would recommend to a beginner in networking, and the manual isn't exactly helpful on occasion.

If you are intending to connect to Demon or some other ISP with this product, I strongly recommend you get their AmiTCP installation first and work with that for a while before attempting to configure AmiTCP/IP v4.2.

Finally, thanks must go to the authors of the AmiTCP-FAQ; Neil MacRae and Mike Meyer. Without them, this review would have been a lot shorter and a lot less complimentary. AC

Demonic possession

Trying to hook up a bare bones AmiTCP installation to Demon is probably one of the best recommendations for getting a Mac with MacTCP or just sticking to the standard Demon installation. AmiTCP comes with no dialler program, no e-mail facilities and no news. When, and if, you manage to connect to Demon the only thing you are going to be able to do from the getgo is use ftp (well, you can Ping and Finger Demon, but the novelty of this soon wears off).

The lack of a dialler program means you have to resort (temporarily, at least) to using your trusty copy of Term or NComm or whatever to dial up your service provider, connect, type in your password, etc. then quit your comms program and run the startnet script. You are advised on how to accomplish all this in the manual.

The only thing they don't tell you is how to log off. Oh, and on the connection front, when you are configuring AmiTCP using the aforementioned Installer script, if you choose to configure a point-to-point interface like SLIP, you are given the option of configuring a PPP interface that doesn't actually come with AmiTCP.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

- RED: 1 Mb RAM
- RED: 2 Mb hard drive space
- RED: AmigaDos 3.x
- RED: AmigaDos 2.04
- RED: Network hardware
- BLACK: 4 Mb RAM

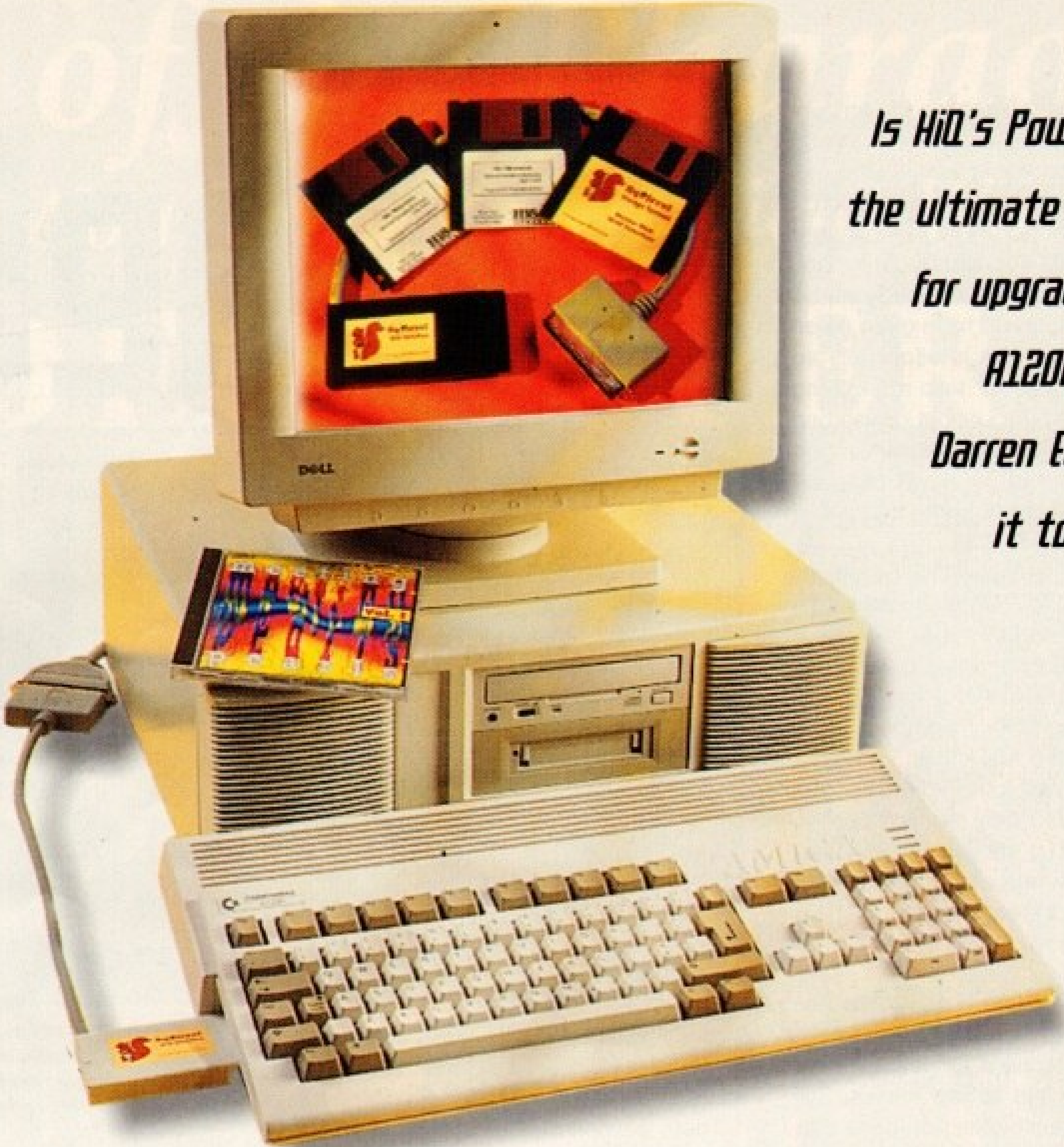
The bottom line

Product: AmiTCP/IP v4.2
Price: £75 plus p+p
Supplier: NSDi
Tel: Not available
e-mail: info@nsdi.fi

Ease of use	3
Implementation	7
Value for money	7
Overall	6

Power to

Is HiQ's PowerStation the ultimate accessory for upgrade-hungry A1200 owners? Darren Evans puts it to the test



It goes without saying that the Amiga is rather limited without a hard drive. Today's software, even some games, are very demanding. Workbench itself is a nightmare of disk swaps when used with a floppy-based system.

It's hardly surprising, then, that hard drives are one of the most popular upgrades Amiga users buy. Until recently, A1200 owners could only add one internal IDE drive to their machine. If it came to the point where a bigger drive was needed, it would have been a case of selling the existing IDE drive and buying a bigger one.

Now, thanks to such devices as the SquirrelSCSI, which allows you to easily connect up to seven SCSI devices to your machine, a peripheral renaissance has opened up with faster and bigger hard drives, and other more exotic SCSI devices, such as CD-ROMs and magneto-optical drives, ready and waiting to be connected to your little 'ol A1200. SCSI devices also have much faster transfer speeds than is possible with an internal IDE drive, so there is a performance boost too.

Because the SCSI standard allows up to seven SCSI devices to be linked together, if you run out of space on one drive you simply add another drive to your existing ones. With the IDE, you would have had to sell your existing drive for a bigger one and then have the hassle of transferring data from the original drive onto the new one.

With this much more versatile upgrade path allowing you to connect multiple devices to your Amiga, the problem of space rears its ugly head. Alas, multiple devices usually means multiple power leads and data leads, so pretty soon your desk becomes a maze of cables.

PROBLEM SOLVED

Now, thanks to those tidy thinking people at HiQ, a neat, low-cost solution to this space problem is available in the form of the PowerStation.

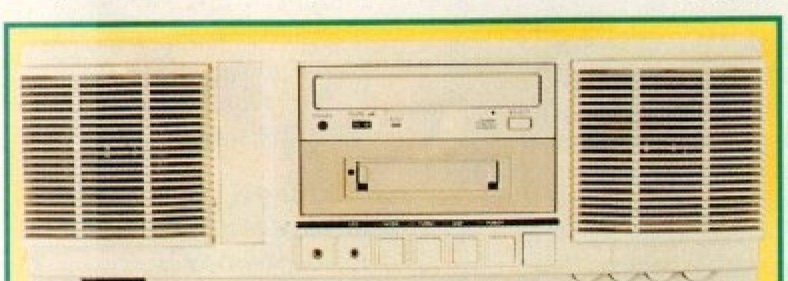
The idea is very simple, take one PC case with a 200 watt power supply and internal mountings for various devices, add a little wiring specifically to attach it to the A1200 and voilà, you have a single housing for multiple devices all running off one power supply, with all those messy data cables neatly hidden away.

There are three different case types available from HiQ – multimedia, tower and desktop. The case shown here is the multimedia model which comes with built-in speakers. HiQ can also offer various 'bundles' featuring case/device combinations according to your needs. Actual installation of the PowerStation is very simple as it's merely an add-on to your A1200. It's not to be confused with products such as the A1200 Tower from Power Computing or the Z5 from Ramiga, which are completely different products that require the A1200 motherboard to be removed and placed in the case.

It simply attaches to your A1200 via a standard A1200 power lead. Yes, the PowerStation is now your A1200's power supply too. This is good news as the standard A1200 power supply is less than reliable. The poor feeble things can have trouble feeding the required power to some upgrades and is often the cause of system crashes for people who have a few add-ons, such as accelerator boards.

At £99.95, it is therefore worth bearing in mind that an empty PowerStation case would make a viable power supply replacement if you find yourself needing a new PSU, especially if you are thinking of adding further devices to your system in the future.

The multimedia case can accommodate five devices in its bays. Three of these are for 3 1/2 inch mechanisms such as floppy disks and hard drives. The other two bays are 5 1/4 inch size for CD-ROMs and other similar sized devices. Of these, both 5 1/4 inch bays and one 3 1/2 inch bay have external access for them and are used for removable medi[a] devices. The other 3 1/2 inch bays are onl[y] useful for fixed-media devices.



Two speakers, CD-ROM, tape streamer and no messy cables. That's what I call a neat solution

The biggest and most important advan[tage] the PowerStation offers Amiga owner[s] who are looking to add additional peripheral[s] to their A1200 is the fact that it will probabl[y] save you £40-£60 for every SCSI device yo[u] buy. Wow, I hear you say, how come? Wel[l] there are two ways to buy peripherals. Yo[u] can buy, say, a 500Mb SCSI hard drive, fu[lly] cased with dual SCSI connectors, hand[y] external SCSI ID switch, built-in PSU and a[ll] the electrical innards required to tie them a[ll] together and make them work for abou[t] £400.

CASH SAVING

Now, just take a look at the internal IDE drives you can buy to plug into your A1200 – that's what's called a 'bare mechanism'. In other words, it doesn't need a case o[r] power supply or the other bits you find i[n] external and fully-cased peripherals. Buying a bare 500Mb SCSI mechanism wi[ll] chop a healthy chunk of cash off the overa[ll] price because you are not forking out [for] these extra bits and the cost of assembl[y].

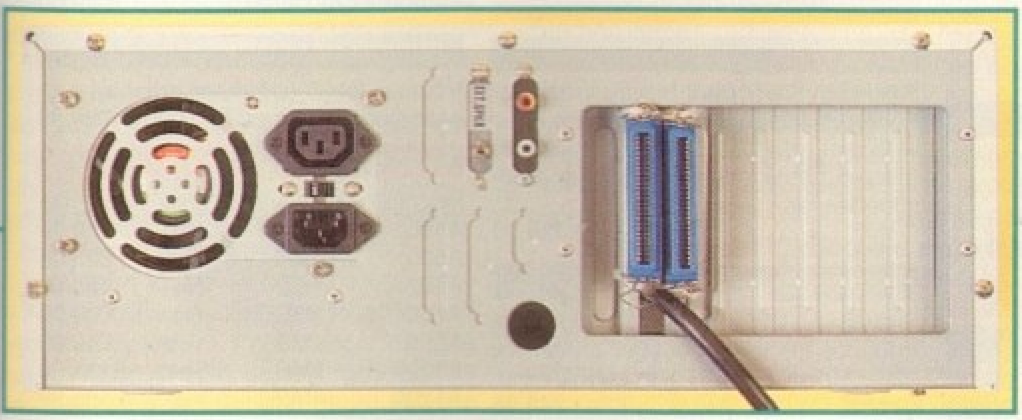
Until the arrival of the PowerStat[ion]

Speak to me

But what about those speakers? Time to dig out my Prodigy CD and a software CD player. After the first Prodigy track, the speakers did not blow up and, although they are not exactly powerful, they are better than some external speakers on the market. The Sound quality is OK but nothing special. Thumbwheel audio controls for volume, balance, treble and bass are mounted on the front of the multimedia case for those finicky perfectionists who want their sounds sounding just right.

Other controls on the case include a power switch, external speaker switch and an audio mute switch. Two other switches which seemed to be unconnected and thus useless are a turbo switch and a reset switch. There's even an LED display which, on our review model, was displaying the number 120. Pressing the turbo switch changed this to 999. Quite useless though.

HiQ also offer a much more substantial pair of external speakers which give a much higher quality (and much louder) sound reproduction. At 80 watts, there should be enough power for most. They can be connected to the multimedia case via a stereo jack and a button to switch the audio from the internal speakers for those who want more 'oomph' in their sonics.



Dual SCSi ports and audio jacks adorn the rear of the PowerStation

the people

those with a SquirrelSCSI would have had to buy fully-cased peripherals, so that if you have added say a CD-ROM and an additional hard drive, that's at least an extra £100 (the price of an empty PowerStation) over what you would have had to pay if you had bought the bare mechanisms. Cool huh?

So, now you know it will save you lots of cash as well as desktop space, you are no doubt keen to get your hands on one. But just how easy is it to add the multitude of juicy SCSI bits to the PowerStation?

Well, it's a little more complex than adding fully-cased devices to your SquirrelSCSI due to SCSI identification requirements. When you can have up to seven SCSI devices connected to your Amiga via the SquirrelSCSI, your A1200 really does need to know who is who.

This is where SCSI ID numbers come in. Each device connected to your faithful SquirrelSCSI has to have a unique ID number from 0 to 7. "But that's eight devices I hear you cry, you said we can have seven devices on our Squirrel, you fibber."

Aha, he says in a 'I can get out of this easy' manner. The SquirrelSCSI itself has the SCSI ID number seven, leaving IDs zero to six for seven extra devices.

With cased devices, you usually get a push-button switch with numeric indicator for easily changing the ID of the device. Well, you would for the extra forty to sixty quid you have to shell out wouldn't you?

On a bare mechanism, however, you have to set this using an electrical jumper switch on the device, which is a black squarish piece of plastic that fits over two metal prongs (usually marked as A0, A1 etc.) on the device. Not exactly difficult but slightly more hassle. Of course, you could probably get the supplier to do this for you if you ask nicely and the point is moot if you decide to buy your PowerStation with installed peripherals direct from HiQ as they will do all that for you.

NOT A WORD

Strangely, the PowerStation user manual that comes with the PowerStation bundles makes no mention of setting ID numbers on bare mechanisms, although it does fully explain SCSI termination considerations, as does the SquirrelSCSI manual.

As you would expect, HiQ base their PowerStations around the often-mentioned SquirrelSCSI device. So, the question of installing the software is another aspect of getting your PowerStation and its SCSI goodies talking to your A1200. Thankfully, the SquirrelSCSI is from HiSoft who are renowned for their excellent and easy-to-follow documentation and HiQ will help with any problems when installing the necessary software.

Our multimedia case worked perfectly first time after installation of the software, and a quick test backup session showed that the CD-ROM, tape streamer and our humble internal 85Mb IDE hard drive were all talking to one another quite happily over the SquirrelSCSI connection. AC

Priceless power

So, are they worth the money then? I would say yes they are. Some would say you could buy a PC case complete with power supply for £40 to £70 and wire it up yourself. Well, yes you could, but when you're fooling around with power supplies and a soldering iron you could quite easily end up with both a dead power supply and a dead A1200. Besides, the saving you make is negligible. The cases themselves are very sturdy and the desktop versions make great monitor stands, bringing the monitor up to a more comfortable eye level.

HiQ offer various system bundles featuring specific devices ready fitted. For instance, the most popular system is a CD-ROM pack featuring a PowerStation case fitted with a CD-ROM complete with a SquirrelSCSI interface, SCSI lead extension (the SquirrelSCSI lead is a little short), and a free CD called Meeting Pearls II.

Other combinations can be made up according to user specification, and HiQ have a good range of quality SCSI devices in stock ranging from simple floppy drives right up to 9.1 Gigabyte hard disks coming in at a whopping £2000. For those who are going to beef up their A1200 with additional peripherals, the PowerStation range is the ideal upgrade accessory.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

2.4+ Workbench

The bottom line

Product: PowerStation
Price: £99.95 (bare case) £299.95 (CD-Rom bundle)
Supplier: HiQ
Tel: 0181-909 2092

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Implementation	8
Value for money	9
Overall	9

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The home stretch



Part 13

This month Paul Overaa rounds off his notes on parameter passing with details of an approach used when writing mixed C and assembler code

Mixed code programming is a topic that unnecessarily frightens a lot of newcomers. Admittedly, in order to get from, say, C to assembler code and back again (or vice versa) you need to know what happens when a C function is called, but providing you concentrate on understanding the overall themes, rather than getting bogged down with specific details, it's not too difficult to appreciate what's going on.

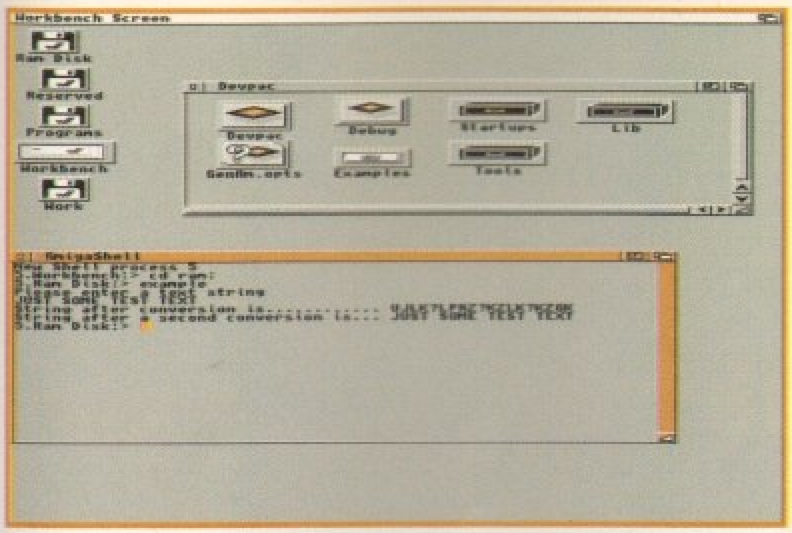
The purpose of this month's notes then is to do three things: Firstly, provide some background info so the accounts you'll read about in your compiler manuals will, hopefully, make a little more sense. Secondly, outline the conventions used with a popular C compiler – I've chosen SAS C.

In addition to this we'll need an example to show how everything fits together and here I've opted for the simplest runable example I could think of! The technique I'll be discussing is what you might call the 'conventional mixed code' approach. It's based on passing function arguments on the stack, and the first step is to appreciate what happens when you place a call to a routine, say, MyFunction(), into a C source program. The compiler uses such source code statements to generate a reference to the named routine and, under normal circumstances, SAS C and many other compilers tag on an initial underscore to the function name.

The call to the function MyFunction() therefore has the linker searching for a routine called _MyFunction and it is this routine, if the linker is going to successfully resolve the reference, that must be provided in the assembly language module!

The code various C compilers produce when they encounter a function call does vary, but the conventions to be followed will always be detailed in the compiler manual. To start with, all you really need to be aware of is that the end result is usually that any parameters present in the function call get pushed onto the stack prior to a call being made to the equivalent subroutine. I say usually because as just mentioned, there are some qualifying conditions with compilers which allow register arguments to be used rather than the stack. SAS C, for instance, then uses an @ character, rather than an underscore, at the start of the function name.

Writing the appropriate C code is easy. It simply involves placing suitably named functions calls, with any required parameters, into the C source. This is done using normal C function conventions – you can even add your own ANSI C function prototypes to make sure the compiler makes the appropriate usage and parameter type checks!



Don't forget that this month's example needs to be run from a Shell window!

OBJECT CODE

The next step involves writing suitable assembly language code and assembling it to produce linkable object code. A couple of assembler directives, called XDEF and XREF, have to be used to get things running smoothly.

XDEF is an assembler directive used to define assembly language labels as being visible to other modules at link time. If you forget it the assembly stage will go OK, but you'll get errors when linking because the linker will be unable to resolve the corresponding function reference in the C code module.

XREF goes the other way, i.e. it tells the assembler that the information needed about the item in question will be imported when the assembly language module is linked. If you forget these then you'll get errors as soon as you try to assemble your code because the assembler will not realise

Some simple example code

If all the references and directives in the above stages are correct the rest is easy – the C source is compiled, the assembly language code assembled, and then the modules are linked together with the startup-code to produce a runable program. This month's example (which needs to be run from a Shell command line) asks the user to type in a string, and then calls an assembly language routine called MyFunction().

The assembler routine performs an Exclusive-ORing (EOR) of all bytes in the string which are neither the NULL terminator nor equal to the mask value itself (thus protecting C's definition of a string by ensuring we don't produce any NULL values within the body of the string). Having done that, the program prints the modified string, repeats the MyFunction() process and prints it again. The second EORing process does, of course, result in the original input string being produced.

The thing to note is that both the start of the string and the EOR mask value are given to the assembler routine as parameters, i.e. they are provided as arguments of the MyFunction() function. This, in turn, means the assembler code patch has to retrieve those arguments from the stack, so here's a run down on what has happened just prior to control entering the assembler patch.

Firstly, the arguments will have been pushed, in right to left order, onto the stack. Then, a return address will have been placed on the stack. Because my assembler patch uses a LINK a5,#0 instruction the contents of a5 are pushed onto the stack as well, so the result is that to access the two arguments of the C function we need to use positive offsets of 8 and 12 respectively!

Before you examine the source listings some points should be made. To start with, you will notice in the piece of assembler code provided that only the scratch registers A0 and D0 are used. This means that for the example, it is not necessary to preserve register contents on the stack. Despite this, I have included some movem instructions to save and restore data registers d2-d7 so you can see whereabouts in the code those save/restore operations are used when registers d2-d7 are needed

The best of both worlds

That's just about it as far as the mechanics of mixed coding are concerned and as you'll see when you examine the C and assembler code on this month's coverdisk, there's nothing particularly difficult about it. The benefits, however, of using this sort of 'hybrid code' approach can be significant – in short, it allows you to harness all the speed advantages of assembler in the sections of the program where it counts, while allowing you to develop the bulk of your code rapidly using a high-level language. The result is that you get the best of both worlds!

➤

that labels have been used whose values are unknown at assembly time.

Most assemblers, incidentally, place a limit on the number of characters within a label that will be regarded as significant. The ANSI C compiler standard also only requires that the compiler caters for six characters with external references, although most handle more. Either check first, or don't use long names for functions and variables whose references might need to be passed between modules.

Function Entry rules: Upon entry to a function the stack, under conventional parameter passing conditions, contains the function arguments placed immediately above the long-word return address which register A7 (the stack pointer) points to. The arguments appear in left-to-right order with the leftmost item being the one immediately above the return address. Here are some standard function entry steps which need to be carried out:

1. Save register A5, which contains the previous function's stack frame pointer. The best idea is to push it onto the stack!
2. Copy the contents of A7 into A5, thereby establishing a frame pointer for the current function which allows you to access the arguments indirectly using the A5 base value.
3. Subtract any stack work area needed from A7.

These steps can, if the work area required is less than 32K, be achieved with the 68000's LINK instruction. Lattice/SAS expects registers D2-D7, A2-A4 and A6 to be intact on return so if any of these registers are to be used, they must be preserved.

Again, it is common practice to place them on the stack. The above stack-oriented procedure forms the basis of a powerful general parameter passing technique and it's well worth learning about. Function return values are passed back in one or more registers, depending on the data type declared for the function in question. Here are the return value details that must be adhered to (see above).

> Writing the appropriate C code is easy. It simply involves placing suitably named functions calls, with any required parameters, into the C source. This is done using normal C function conventions

Return Type	Size	Pass Back Details
char	8	low byte of D0
short	16	low word of D0
long	32	all of D0
float	32	all of D0
pointer	32	all of D0
double (IEEE)	64	passed in D0 and D1 with high bits in D0
double (FFP)	32	all of D0

Having set up the required return value, the routine needs to reverse its entry steps – restoring the registers, advancing the A7 stack pointer past the work area, and restoring the previous frame pointer to A5 before exiting via an RTS instructions. Again the 68000 has an unlink (UNLK) instruction intended to simplify these operations. (Note that it is the job of the calling function, and not the called function, to remove any arguments from the stack).

c_code.c - data passed as C parameters

```
#include <exec/types.h>
#include <stdio.h>
#define MESSAGE1 "Please enter a text string\n"
#define MESSAGE2 "String after conversion is............"
#define MESSAGE3,"String after a second conversion is..."
#define LINEFEED  10
#define MAX_CHARS 80
#define EOR_MASK  0x1F
void MyFunction(TEXT *input_string, UBYTE EOR_mask);
main()
{
TEXT input_string[MAX_CHARS+1];
space for user string

UBYTE EOR_mask=EOR_MASK;
Exclusive-ORing conversion mask

WORD  keyboard_character; UBYTE count=0;
printf(MESSAGE1);
while ((keyboard_character=getchar())!=LINEFEED)
        {
        if (count<=MAX_CHARS) input_string[count++]=keyboard_character;
        };
input_string[count]=NULL;
add terminal NULL

MyFunction(input_string, EOR_mask);
EOR the string

printf("%s %s \n",MESSAGE2,input_string);
display converted string

MyFunction(input_string, EOR_mask);
2nd EOR operation

printf("%s %s \n",MESSAGE3, input_string);
display string again */

}
```

Listing 1: The C code part of the program

assembler_code.s - associated assembler patch

```
            XDEF        _MyFunction

_MyFunction link        a5,#0           workspace not needed
            movem.l     d2-d7,-(sp)     normally where we preserve regs
            move.l      12(a5),d0       retrieve mask value
            move.l      8(a5),a0        retrieve string pointer
            subq.l      #1,a0

loop:       addq.l      #1,a0           move to next byte
            tst.b       (a0)            check it
            beq         exit            quit if NULL terminator
            cmp.b       (a0),d0         will it EOR to NULL ?
            beq         loop            if YES don't EOR it
            eor.b       d0,(a0)         safe to convert
            bra         loop            keep going

exit:       movem.l     (sp)+,d2-d7     normally where we restore regs
            unlk        a5
            rts         back to C
```

Listing 2: With this assembler patch the parameter data is collected from the stack!

bits in D0

pointer to
ructions. Ag
LK) instruct
erations. (N
function, a
remove a

e C code
rogram



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TACTICAL MANAGER 2	**19.99**	—	—
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Top Gear 2	17.99	17.99	19.99
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TOWER ASSAULT	**13.99**	**13.99**	**19.99**
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Ultimate Soccer Manager	19.99	19.99	—
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Vital Light	19.99	—	19.99
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Wild Cup Soccer	17.99	17.99	19.99
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Wiz N Liz	10.99	—	—
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World Class Leaderboard	10.99	—	—
World Class Rugby 95	13.99	—	—
World Cup Golf	—	—	29.99
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WORLD CUP YEAR '94	**19.99**	—	—
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Jack Nicklaus Unlimited	12.99	—	—
J Nicklaus Designer Clip Art	7.99	—	—
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Sooty's Paint Package	9.99	—	—
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Cheetah Bug	11.99
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Freewheel Steering Wheel	24.99
Gravis Adv Switch Joystick	22.99
Gravis Gamepad	15.99
Mouse	10.99
Mousehouse	1.99
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Logic 3 Delta Ray Autofire JY156	10.99
Logic 3 Quatro GT Autofire JT155	10.99
Logic 3 Quatro JT154	8.99
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Quickjoy Jetfighter	11.99
Quickjoy Pedals	13.99
Quickjoy Topstar	17.99
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Screenbeat 3 Speakers SB203	12.99
Screenbeat 4 Speakers SB204	11.99
Screenbeat 5 Speakers SB205	11.99
Screenbeat Pro 50 Speakers SB250	32.99
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SX-1 CD32	**189.99**
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20	11.50	13.50	7.50	11.50	6.50	9.50
50	27.50	32.50	17.50	27.50	16.25	22.50
100	52.50	62.50	32.50	52.50	29.99	42.50

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B007 Text Engine	1.25
B008 PC Task	1.25
B009 File-a-fax	1.25
B010 QED	1.25
B011 A-gragh	1.25
B012 Text Plus VERSION 4	1.25
B013 Analytic ALC	2.50
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B016 Little Office	1.25
B017 Budgets V1.34	1.25

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E009 Colour The Alphabet	1.25
E010 The Highway Code	1.25
E011 Junior Maths	1.25
E012 Electronic Train Set (1 MEG)	1.25
E013 Learn & PLay 1	1.25
E014 Learn & Play 2	1.25
E015 Treasure Hunt	1.25
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U017 Cannon & Citizen Printer Driver	1.25
U018 H.P. 550c Printer Driver	1.25
U019 Imploder V4.00	1.25
U020 Bad Format	1.25
U021 Amiga Beginers Guilde	1.25
U022 Better Bench V1.2	1.25
U023 De-grader 500 600 1200	1.25
U024 Extermin-8 Virus Killer	1.25
U025 Engineers Kit (1220 only)	1.25
U027 Fake Memory for a 1200	1.25
U028 Action Replay For The 600	1.25
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U030 A.C.E.S Database	1.25
U031 Abases v1.33	1.25
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U038 Number Pad For 600	1.25
U039 Calorie Base	1.25
U040 J R Comm	1.25
U041 Race Raptor	1.25
U042 Pools Pools V2	1.25
U043 Training Log	1.25
U044 Mastie Niblick	1.25
U045 D-Solve	1.25
U046 Lockpic v2.0	1.25
U047 Relo Kick v1.4	1.25
U048 Procad Electroid	1.25
U049 Dividends Winner	1.25
U050 Odds On	1.25
U051 Power Copier	1.25
U052 Essential Virus Killer	1.25
U053 Soccer League	1.25

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D008 Batman Cartoon	1.25
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D018 Holsten Pils	1.25
D019 Popeye Meets The Beach Boys	1.25
D020 Star Trek Animations	1.25
D021 Moonwalker Demo	1.25
D022 Mike Tyson (1 meg)	1.25
D024 Terminator	1.25
D025 Aliens Demo	1.25
D026 Life Of Brain	1.25
D027 The Garfield Slideshow	1.25
D028 Teenage Turtles Slideshow	1.25
D029 WWF Sideshow	1.25
D030The Gathering GFX	1.25
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D042 Girls of Sport	1.25
D043 The Run (1 meg)	1.25
D044 Star Trek Animations	2.50
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D046 How To Skin A Cat	1.25
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D052 Rave Length	1.25

MUSIC

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G028 Tetren	1.25
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G043 Super League Manager	1.25
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SP004 Mr.Men Olympics	2.50
SP005 Slamball	1.25
SP006 Strikeball	1.25
SP007 Amos Cricket	1.25
SP008 Grand Prix Simulator	1.25

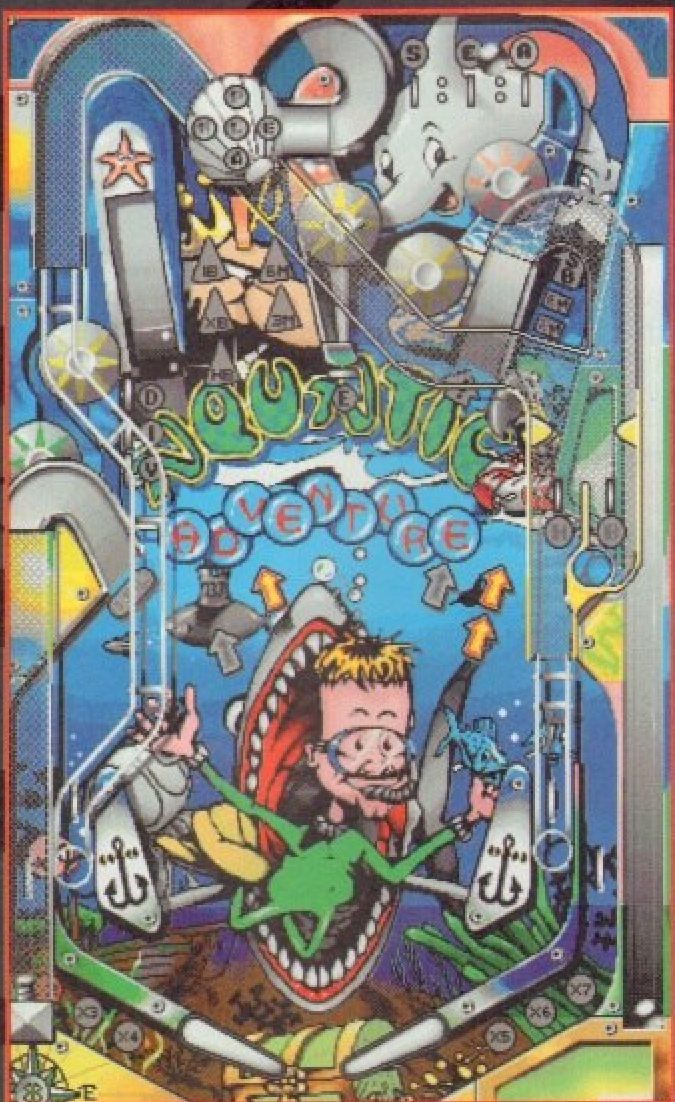
SIMULATIONS

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SM003 Napoleonic Warfare Sim v5	1.25
SM004 Wheel of Fortune (not 1200)	1.25
SM005 Card Sharp	1.25
SM006 Sub Attack	1.25
SM008 Act Of War	1.25
SM009 Micro Market	1.25
SM010 Strategic Games	1.25

500

Too hot to handle

Can Unique Developments' new Pinballer take on the might of Digital Illusions' classics?



Under the System Spotlight

Virocop
F1 – World Championship Edition
International Golf
Tactical Manger 2

System Analysis

Beat the System
Still stuck on RPG adventure, Ishar 3? Take a look at our cheat guide

Preview – Star Crusader
We take a sneak preview of Gametek's forthcoming space combat simulator

Preview – Wheelspin
Hang your fluffy dice on the dash and rev your engine as we take a look at Black Legend's racer

Preview – Timekeepers
Vulcan Software's puzzler previewed

System Essentials
Bargains galore – the latest budgets rounded up and reviewed

SYSTEM

Your essential guide to Amiga gaming

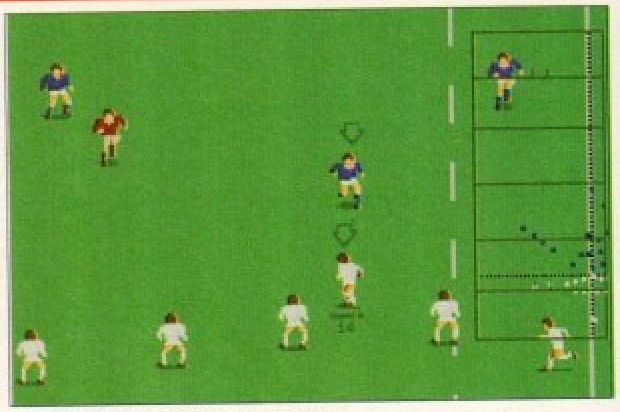
Rugby special, the World Cup way

Audiogenic have upgraded their original World Class Rugby game with a '95 version. This update includes all the squads from the 16 countries that made it to the 1995 Rugby World Cup finals. The new version also allows you to enter your own teams and save them to disk.

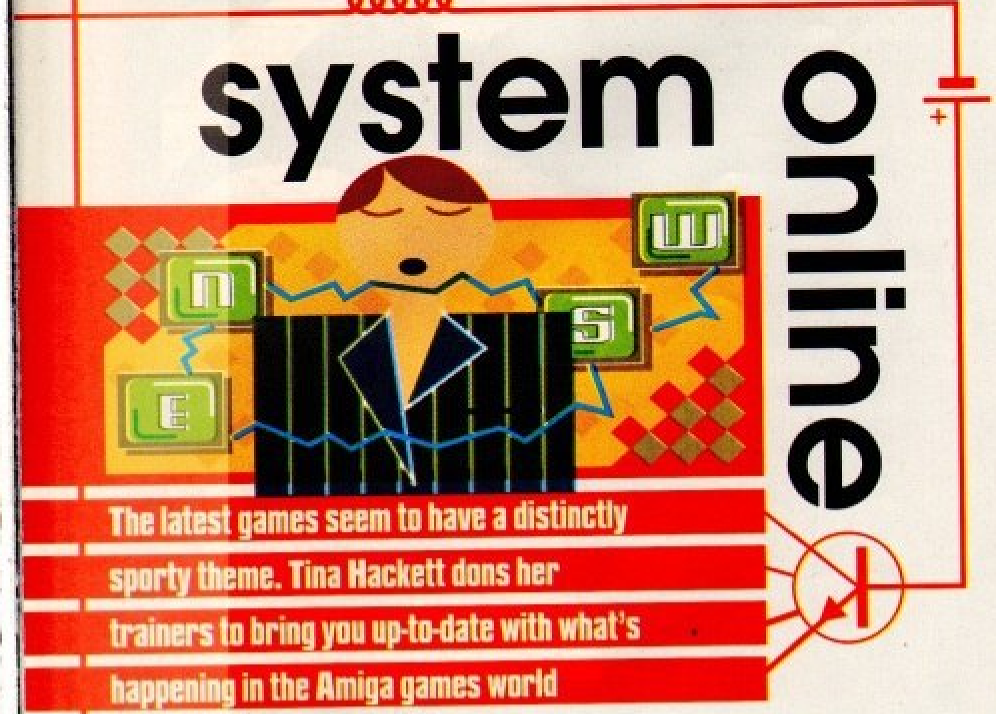
It covers all the major elements of rugby union such as line-outs, penalties and conversions, and the advantage rule has also been included. You can play against a human or computer and a tournament mode allows a multi-player option.

Two views are available to play the game in. Zoom-In allows a close-up view of the action whereas Zoom-Out provides a more strategic angle. You can also watch replays at any time and then save them to disk.

The game will be available for £19.99 and is compatible with all 1Mb Amigas. Owners of the original, however, can upgrade for £9.99 (+ £1.25 p&p) directly from Audiogenic, enclosing the bar code from the game or by quoting the 13-digit bar code number. Audiogenic are at: Unit 27, Christchurch Industrial Centre, Wealdstone, Harrow HA3 8NT. Please mark as 'Rugby '95 Offer.'



Upgrade to World Class Rugby '95



system online

The latest games seem to have a distinctly sporty theme. Tina Hackett dons her trainers to bring you up-to-date with what's happening in the Amiga games world

Sensible Golf – ready, willing and able

The eagerly anticipated Sensible Golf is ready to hit the shops and it's looking pretty spectacular! The usual Sensi sprites are used and the overall feel is of a fun, high-quality title that can either be played as an arcade game or as a realistic sim. Take part in full tournaments or for novices to the sport, you can work on your skills on the practice holes.

We'll be bringing you a full review next month, but in the meantime take a look at these screenshots.



Players will have a vast range of courses to choose from, all providing varying challenges



The miniature Sensi sprites make an appearance once again

Budget bonanza

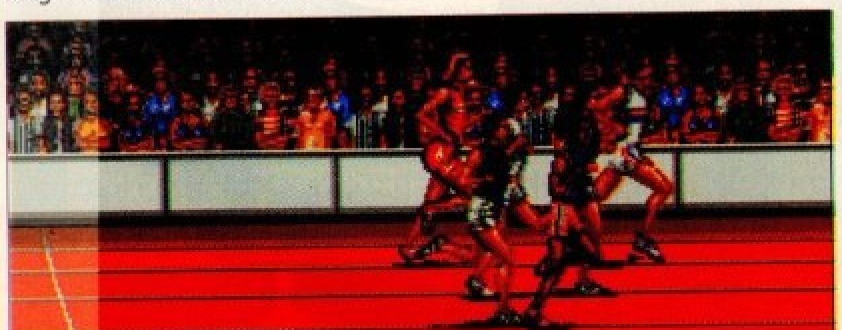
Digital Integration have some more bargain buys in store for the penny-conscious. First on the schedule is MegaTraveller 2 – Quest for the Ancients. It's an RPG adventure where you must save the planet Rhlanor from destruction. A toxic slime is pouring out of the ancient ruins and you have a quest to find out what is causing it.

There are 127 worlds to discover, each having over 500,000 square miles to explore. Ten different starships are available and you'll have a good range of weapons and armour to choose from.

Next up is International Sports Challenge, a sports simulation with over six different sports and 21 events. One to four players can take part in a variety of sports ranging from cycling and clay pigeon shooting to running a marathon.

MicroProse's submarine simulator, SubWar 2050, is also on the schedule. Set in 2050AD, the seas have become a vital source of food and energy, and sabotage is commonplace as the battle to defend underwater territory ensues. You play a mercenary sub pilot testing your skill in underwater combat and learning moves such as Knuckles and Deep Dives.

SubWar 2050 is priced £16.99, while International Sports Challenge and MegaTraveller 2 are £14.99.

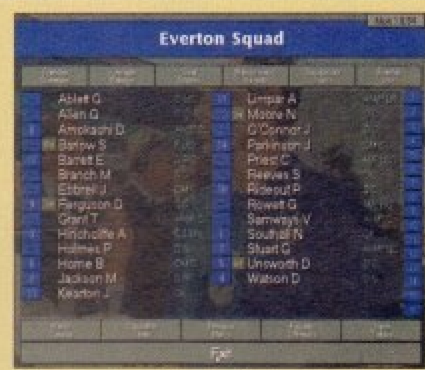


International Sports Challenge forms part of Digital Integration's latest budget line-up

Hot shots

A September release is planned for the sequel to one of the most popular football management games ever. Oliver Collyer's Championship Manager sold over 250,000 copies and now Domark have taken the suggestions of players of the original and incorporated them into this new game.

The follow-up will feature an international angle, so as well as being able to play in domestic management, you can also take part in the European Championships or the World Cup and the like, and you can manage any International side. It also promises to be as stats packed as ever and includes things such as key tackles won per player, to shots on target. A very realistic transfer system will be used and real player stats will provide a reference source for football enthusiasts.



The stats-based football management sim is back. Look out for it this September



Championship Manger 2 will be as packed full of detail as ever

Fantasy football

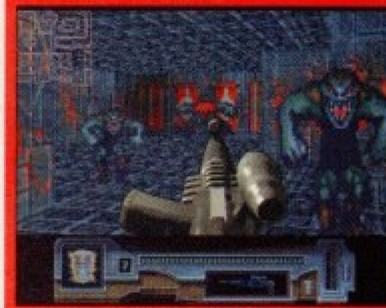
Ascon's excellent football management sim, On the Ball – World Cup Edition, is being released this summer on budget. This new style of sim replaced all the screens of stats usually found in management sims, and replaced them with a more visually appealing approach. Different locations, shown as scanned watercolours, are used to provide the interface, and animations give a realistic match day feel.

On the Ball also concentrates on giving the game a human touch, with each player having their own personality traits, so you'll have to manage them accordingly. You can also choose to play any team you wish in your bid for the World Cup. Priced at £12.99, On the Ball will be available this summer.



A highly authentic, fun management sim, On the Ball is now available on budget

Flick of a switch

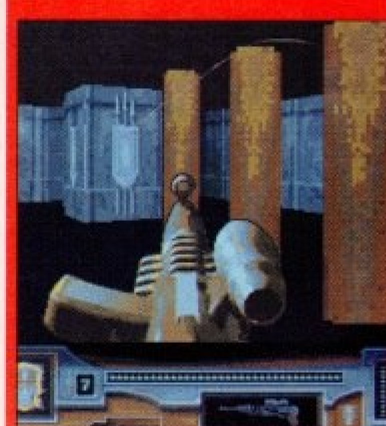


Another Doom competitor on the way. This time from Polish team, Union Interactive

After months of Amiga owners practically drooling over Doom and Doom 2 on friends PCs, we can finally have our own version – we hope. Up until now, there's only been the rather disappointing Death Mask but things look set to change with three, four, possibly five contenders on their way – Team 17 have Alien Breed, Manyk have Fears, and Black Magic have Gloom. And now a Polish team called Union Interactive have two games of this genre on the horizon.

One is called Switchworld and looks to be the usual big gun, gloomy corridors, kill monsters thing. The storyline revolves around the fact that a dictator planned to conquer the world with biomutants but thanks to the international police, he failed. However, he was never caught and has decided to go back in time to create more biomutants. Or something. Anyway, it's now up to you to travel through the five episodes, killing everything in sight.

Their second offering is Behind the Iron gate, another quite similar game that uses this 3D, first-person perspective. It's going to be A500 and still promises to run at a fair old speed. As well as the shoot-'em-up aspect, it also will have an RPG/adventure angle to it.



Totally obsessed!

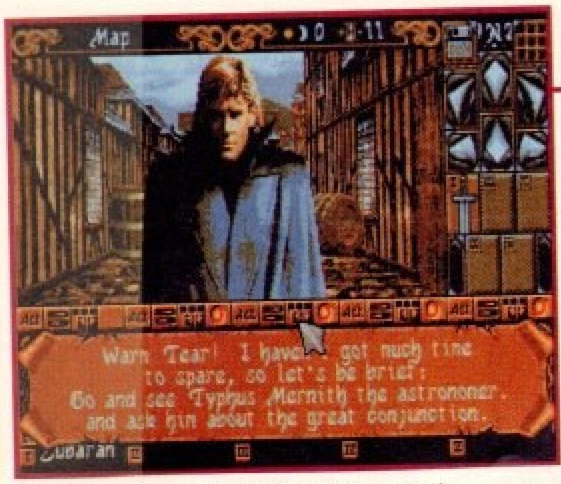
You will notice later in this section a review of a rather nifty pinballer called Obsession. It's really rather good and has earned itself 87 per cent. Please note, though, that it can only be obtained from Merlin. They can be contacted at PO Box 77, Stroud, Gloucestershire GL6 9YD. Obsession is priced at £29.95.

Next month

Thanks for your response to our surveys. After careful consideration we've decided to re-design the games section. This way, we can more accurately address the needs of our readers in what they'd like to see in System. We are also aiming to bring the section more in line with the rest of the magazine.

Reviews will be more concise and analytical, previews will give you an insight into the making of the games and where appropriate, we'll be bringing you more technical information.

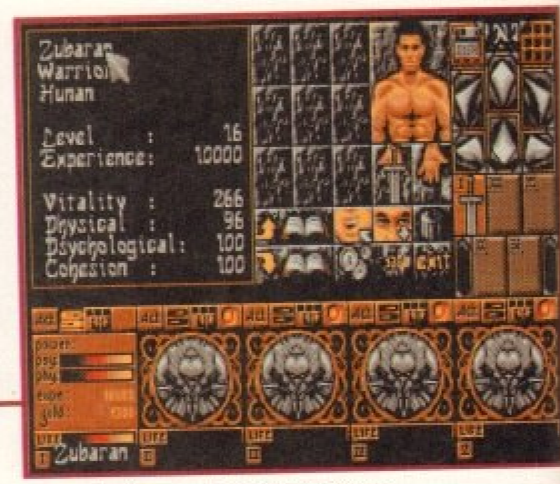
As always, our reviews will be of finished products only and we'll also provide you with better compatibility information, thus enabling you to make more informed choices on buying a game. Get ready for the new look System next month.



Talking to anyone you may meet could result in them giving you vital information



Watch out for the bandits around the corner. They will try to steal your money



Keep checking your endurance levels. Replenish with first aid if necessary

beat the system

Ishar 3

Adventure games tend to cause most problems among you gamers. Not for long though, as we send out the team to report on the many missions of Ishar 3

To begin with, you must go and see Alstar who is standing opposite, and he will indicate where Typhus Mernith's Observatory is on the map. This is your first task. Before you set off, buy some lime-blossom tea from the shop a little way along the southern ramparts of the rich town.

In the first street you will encounter some bandits. Go in to the inn to enrol some companions before fighting, and when you defeat them, search them for money.

Head towards the rich town. There is only one way in and it is located on the western side, between two porches. You must buy a necklace for 4000 PO from the big guard at the entrance or you will be refused entry. Afterwards, put the necklace on.

Your next step is to find Typhus, give him the lime blossom tea and recover the playing card. He indicates where Mather Fudis is on the map. Once you arrive at the indicated place, take the scroll on the ground and read it, then set off towards the mentioned inn. On arrival, you must listen. Erkh Moltus is speaking to you, buy him some food and listen again, and answer YES to the question.

At Mather's, don't accept to go out, give him the card when he says OUT. Wait to see the gate and click on it to go through.

In the garden, go eastwards to find a passage, but you will have to kill the bear first before you can proceed through the passage. Travel south for a long way and then east when your route is blocked. You will come across a racoon on a rock. Take its scroll, then pick up the mushrooms from the forest. Head back towards Mather and give him the scroll. You must then pick up the key.

Go to the house indicated on the map. Fetch the magic flask and the pendant, and put the pendant on. Go to the inn, south of the theatre. Listen, then recover the Kelonia powder. Buy the other potions in the shops and mix them all together in the magic flask. Go back to the racoon, give him the potion, recover the talisman and head



Find Typhus and give him the lime blossom tea and recover the playing card to advance to the next stage



The rich town is located on the western side of the map, between two porches



Head towards the Inn. You must go to sleep and eventually begin to dream

Tips to help along the way

To move forward in time, simultaneously press:
<CTRL> + <ALT> + <A> + move mouse completely to the left of the screen and click the left mouse button.

To return life points to the maximum, simultaneously press:
<CTRL> + <ALT> + <V> + move mouse completely to the left of the screen and click the left mouse button.

When you are creating your team, choose five human beings distributed as follows:

3 Knights-errant
1 scholar (with 16 in strength, constitution, agility and wisdom)
1 Magician (with 15 in strength, constitution, agility and intelligence).

back towards the town. Go to the theatre in the very south of the rich town and enter after 7pm. Listen to Gulnar, give him the talisman you received from the racoon, wait for the gate to appear at 2 am, then proceed through.

In the jungle pick up a crystal. Go south-east and find the tribe with the chief – they are called the 'East End Lads'. Fight and kill the chief. In the jungle you may encounter several leopards. Kill them and take their skins which you can sell for huge amounts of money to the shopkeepers of the town.

Head back through the theatre gate. In the jungle, go east then south to find the meteor near the North wall. Put the missing piece found in the jungle on it, and a gate appears. Go through.

Before heading towards the mountains you must buy some fur coats to keep warm. When you get there, find the time machine which is located towards the north-west. Put the crystal on it and go back into town. There will be many beasts in your way!

Find a gate which has just appeared in the north-western part of town – go through it before 12 noon. Your next task is to free the princess in captivity – she is held in the dungeon. In the dungeon there will be a fireball in the very first corridor, wait for it to pass, then quickly turn right and then take the first right to enter the underground cavern.

At the fork turn left. You will have to battle against hoards of skeletons to continue. Take the third turning on the left to activate a lever in the dead-end. You can walk about through the whole cavern to pick up all the main essentials – bread, money and weapons. Head back towards the entrance to the cavern and climb the stairs to return to the dungeon. There will be more opponents in your way, each one becoming stronger as the game goes on. These must be defeated.

GOING DOWN

You will eventually find the princess in a room with lava, and you must pass on the three slabs which cause the cage to go down. If you pass on four, the cage falls, on two, it's too high. There will be more opponents in your way once again. When you have freed her enlist her help and head back into town.

Go and sleep in an inn. In a dream, a character tells you to go to a house which he indicates on the map. Go in front of his house and take the key from the fountain. Go into the house and you will find five guard's uniforms. Put these on. Head towards the palace with the disguise on so you can get in. You must remove the helmet in front of Zoltar and enlist his help. Return to the forest and Zoltar and Thina will leave.

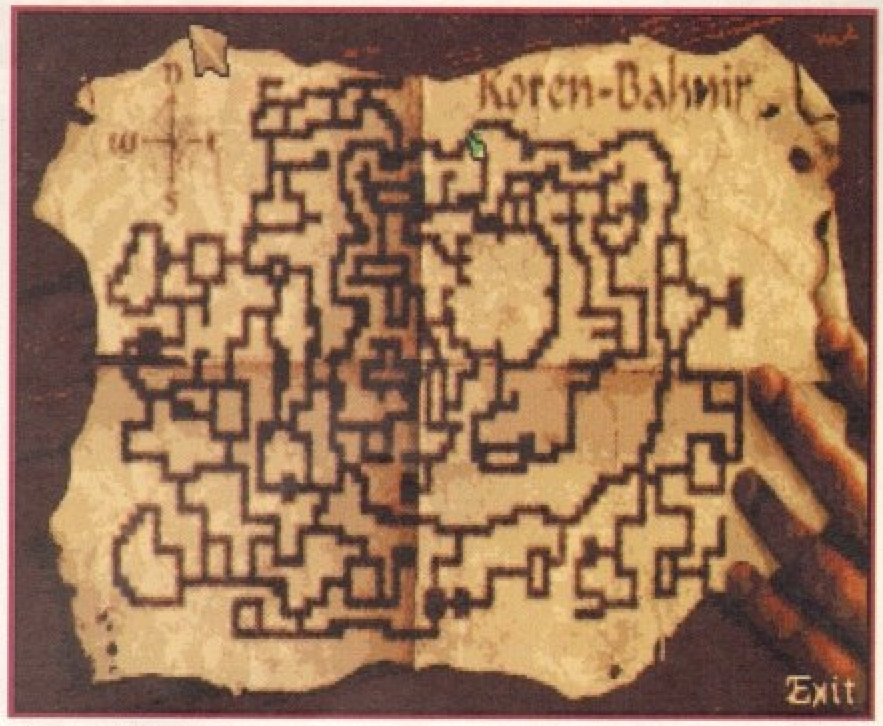
Head back into town once again. Mather will give you a crystal which you must place on the time machine in the mountains.

Return into town, and you will find yourself in mountains in a different era. You will find a belt in the snow. Return once again back into town. Put on the magic belt and return to the forest. Look for and pick up a magic sword – it will be right in the heart of the jungle.

Go east and at the end, head south. You will find a house with Zoltar's son and his wife, a sorceress. She has the powers to protect you from your final enemy – the dragon.

You will find the dragon in an underground cavern. You must walk on the paving stones marked with a circle in a certain order – seven stones must be activated to gain access. You will eventually reach a door which will lead to the dungeon; go through it after 12 noon. To defeat him from a distance, use the maximum number of arrows and the ice-cloud spell. If you're up close, you must position yourself so that the fire protection spell is always active.

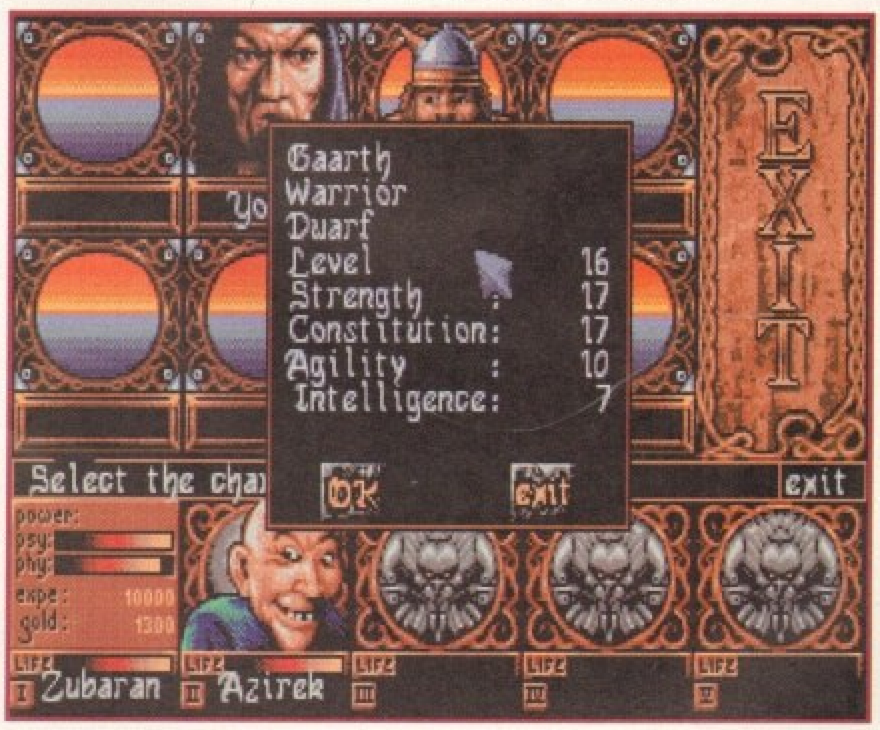
You must give first aid to your companions after each blow struck by the dragon. Regeneration potions are indispensable. Eventually you will defeat him, putting an end to Shandar's evil acts. You will then have proved yourself against the greatest warrior of all.



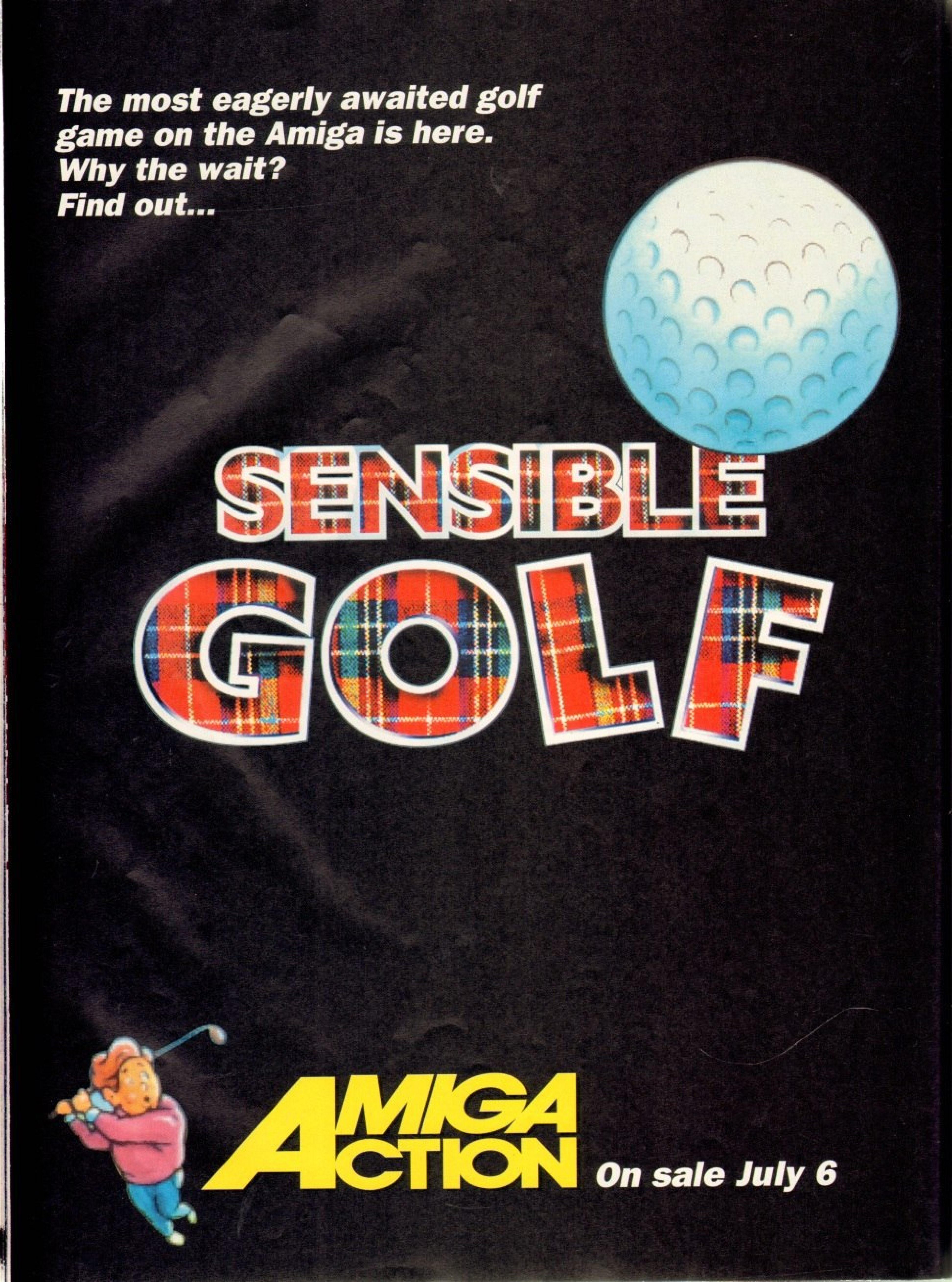
Keep looking at the map to make sure you're not heading the wrong way



You can recruit many troops from the local inns – they can be very handy



Take care when you select your team. Only choose the stongest of characters


The most eagerly awaited golf game on the Amiga is here. Why the wait? Find out...
SENSIBLE GOLF
AMIGA ACTION
On sale July 6

INTRODUCTION

Golf games have slowly disappeared over the last few months, leaving little or no trace at all. The only golf sims worth a mention are MicroProse Golf and possibly PGA Tour. The others have tried and almost succeeded – Nick Faldo's came the closest only suffering an awkward control system which became very clumsy at times.

However, Summit Software are a new company hoping to bring gaming entertainment to your Amiga screen. With bigger companies undecided about their future within the Amiga market, smaller companies have taken the opportunity to steal their limelight, Team 17 being a fine example. Summit Software hope to do a Team 17 and dominate the market with quality products. Good luck to 'em.

To kick off their career, they've penned in some releases already, namely Tracksuit Manager, Rage and Rugby Boss. Let's hope these can rank alongside some of the past Amiga greats. We'll see.

Publisher: Summit Software
Developer: Saddletramps PD
Disks: 3
Price: £12.99
Genre: Sport sim
Hard Disk Install: No
Control System: Mouse
Supports: A500/600, A1200/4000
Recommended: 68020

PLAYABILITY

Basically, the idea behind Super Loopz is to join the different blocks that fall onto the grid to create continuous loops. There is a time limit to put down each piece, and if you can't place it you lose a life.

The game can be played by using a one or two-button joystick, a CD32 controller or a mouse. The joystick seems to be the easiest, and when the piece drops onto the playfield you can rotate the shape by pressing fire and right, then when it is in the position you want, press fire and left. However, once it is in position it is permanent. The bigger the loop you can make, the more points you'll get.

Super Loopz has a variety of different sections to play. The arcade game can be played by one or two players, and you must make ten loops to progress on to the next level. Three bonus games can be accessed by completing different missions.

You can also play a challenge game which means you can pit your wits against an opponent. You each get a separate grid and the winner is the one who scores the most points.

There is a puzzle option too which involves being shown a complete loop with some of the pieces then dropping off one by one. You have to watch carefully because you have to remember where they go and replace them.

International Golf

This time, checked trousers and funny hats are the order of the day. Andy Maddock steps up, cracking Tarby gags all the way... ho! ho!

GRAPHICS

Graphically, International Golf is fairly good. The action is viewed top-down, with well-drawn trees accompanied by the obvious golfy scenery. The scrolling is nice and smooth too, leaving me with no particular major gripes at all. But – there's always one – the overall look and feel gives a very PD impression, if you know what I mean. The reason behind this is because the actual developers are a PD team called Saddletramps PD. They will obviously need time to make the move from PD up to full price, but I'm afraid it shows up a little too much for me.

The graphics aren't as polished as say, Sensible Golf, and the whole feel gives an impression of being programmed in Amos. Most newcomers to the market encounter these problems and usually move onto another programming language to get the best results from their particular genre of game. However, as Summit Software have obviously tried very hard I shouldn't really knock them.

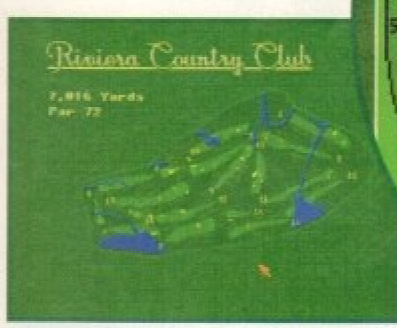
If golf is your game and you like a good 18 holes of planning what clubs to use, power and accuracy all by yourself, without any help from the computer, then graphics don't particularly come into it. Unless, of course, you like to take in the scenery on your way to the next hole.

On the box the game boasts superb colour graphics featuring a full rotoscoped golfer. Yes, maybe, but it still looks like public domain.

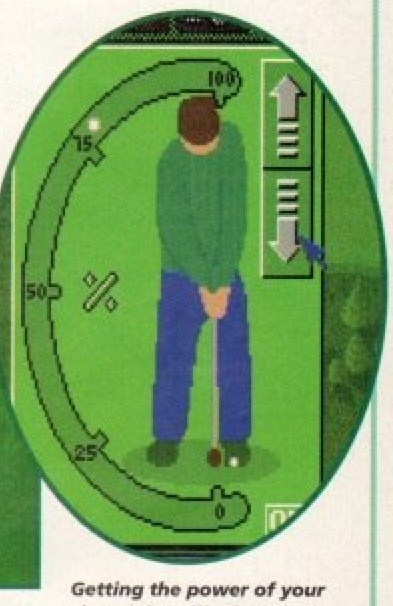
68%

SOUND 70%

Sound for golf games is fairly non-existent – featuring merely the odd swoosh of the club and a bird or two tweeting along in the background. All these effects have been included which makes the game an absolute pleasure to play. The actual sampled tweets of the birds are the best I've heard on any game of this genre, beating MicroProse Golf hands down – as far as tweets go.



These are the 18 holes of the Riviera Country Club course. They all look incredibly challenging



Getting the power of your shot right will take practice. Don't expect a hole-in-one on your first hole

OPINION 52%

Overall then, a nicely presented game which may not have the depth of MicroProse or PGA, but the actual gameplay is very different by managing to sustain an arcade feel.

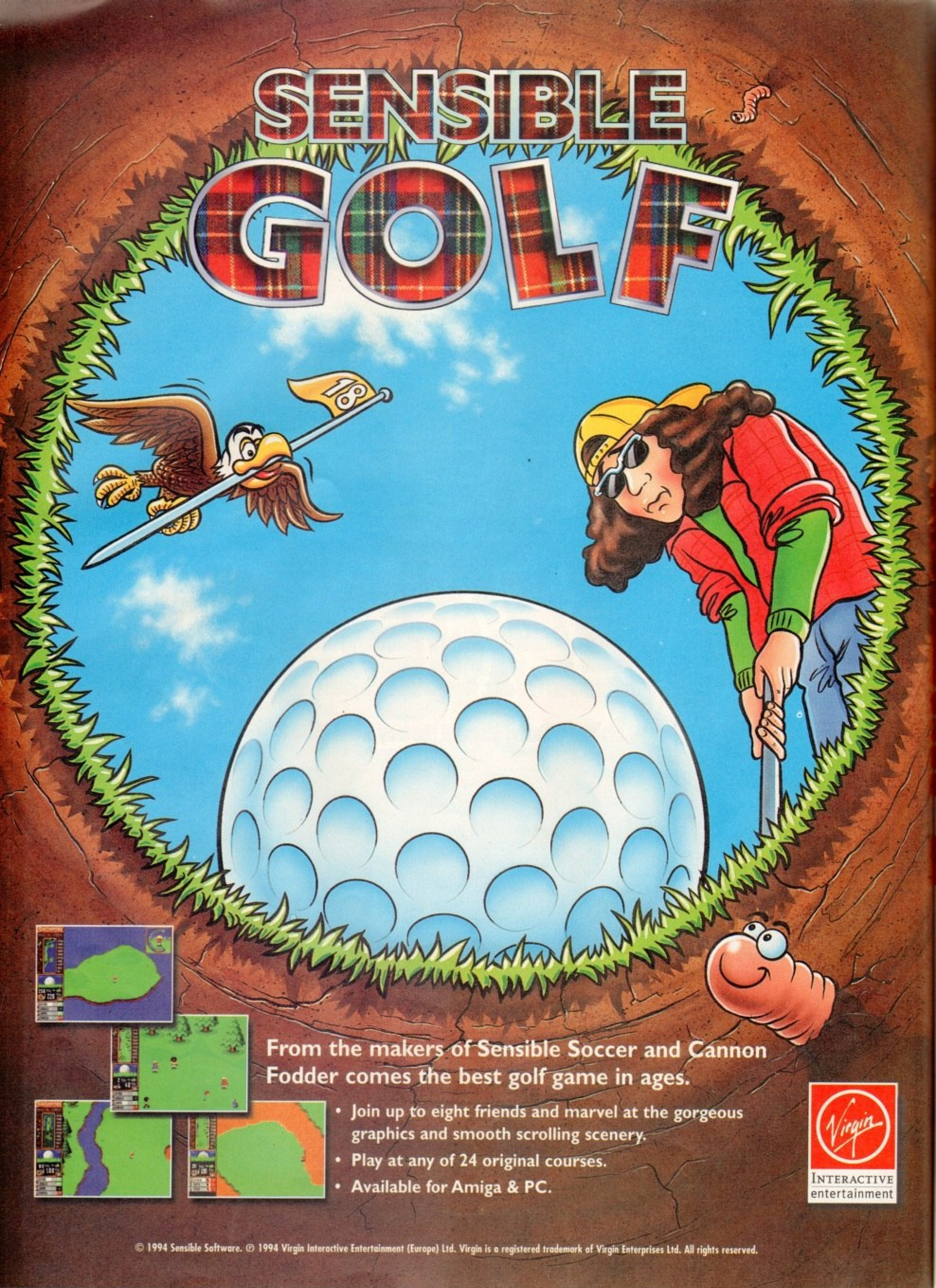
After each shot you have to alter your positioning, club, power and height of the shot all by yourself, without any help from the computer whatsoever, whereas other golf sims give you a little help by lining you up with the hole and selecting a suitable club.

One aspect of the game which became frustrating is that it fails to give you the yardage for the clubs. Prior knowledge of golf is absolutely essential, which unfortunately I do not posses. Consequently, I was frequently over hitting the ball.

There are two courses included in the game and an option to install new ones when they are released. There's also a tournament option and a two-player game. It's certainly not short of ideas.

Incidentally, a demo of International Golf is being released as public domain by Saddletramps PD. This, perhaps, is a better idea than hurrying the process and releasing the game at full price. Summit Software should have waited for a response on the demo and then acted accordingly.

As it stands, it's a good first attempt at full price software, and one that shouldn't be overlooked. If you're into the finer side of golf it could be a worthwhile buy.


SENSIBLE GOLF
18
From the makers of Sensible Soccer and Cannon Fodder comes the best golf game in ages.
• Join up to eight friends and marvel at the gorgeous graphics and smooth scrolling scenery.
• Play at any of 24 original courses.
• Available for Amiga & PC.
Virgin
INTERACTIVE entertainment
© 1994 Sensible Software. © 1994 Virgin Interactive Entertainment (Europe) Ltd. Virgin is a registered trademark of Virgin Enterprises Ltd. All rights reserved.

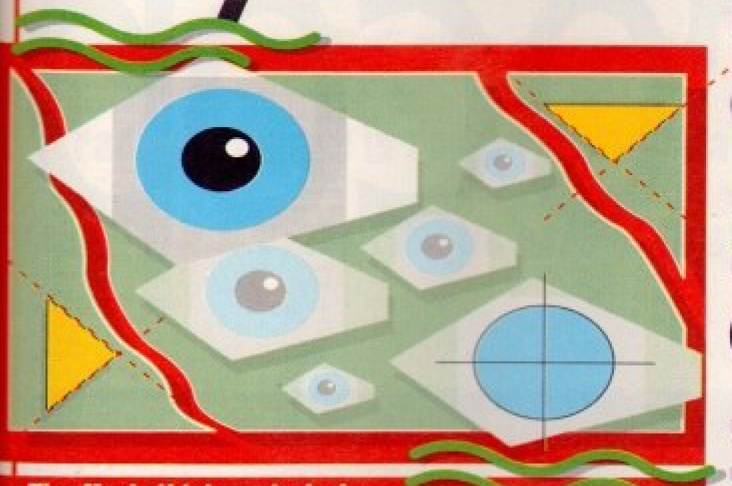
Move closer



The game will be controlled via a mouse and a set of icons that you simply click on according to the action you wish your platoon members to carry out. Click on the appropriate icon and then paste it on to an empty square on the screen. When a character walks onto to it, he will perform this order.

1. A helpful 'Rubber' feature which allows you to erase a pasted action
2 to 5. The direction arrows make the character walk the appropriate way
6. Click on the clock to make your troop wait there for a period
7. Using the shoe will enable a character to jump over the object in front
8. Use the spanner to operate an object
9. Teeth make your character act aggressively
10. Lightning will allow you to replay a previous level
11. These icons tell you whether your men are alive, dead or have safely moved on to the next level
12. Keep an eye on the level indicator to see how many levels have been completed

system preview



Time keepers

Tina Hackett takes a look at Vulcan Software's forthcoming project, Timekeepers. This is definitely a game for those with a penchant for puzzlers

Vulcan Software, renowned for their Valhalla speech adventure games, are embarking on a new series for Amiga owners. Called 'The Mini Series' it will consist of a range of quality titles at very low prices, from £12.99 to £15.99. Vulcan are concentrating on their mail order service which allows them to sell their own brand more cheaply. The games will cover a variety of genres and each will have a data disk shortly after its initial release.

Timekeepers is the first of these games and is of the puzzler/strategy kind. Graphically, it's very reminiscent of their Valhalla games, and those who've played their first foray into Amiga gaming will instantly recognise the distinctive Vulcan style which uses a combination of dark, murky shades to provide an original, and interesting, approach.

The characters of the game, the rather miniature Lemming-esque type race, are the Timekeepers. They are a police force who were established to protect the 4th dimension from a psychotic warlord. His aim is to destroy the entire human race and intends to do so by planting nuclear devices throughout the course of history. He has hidden four of his most powerful yet in four zones – Stoneage, Medieval, Vietnam and Space. Commander Seymour of the Timekeepers knows of the bombs' whereabouts and must send teams into the lands to locate and disarm them.

You take charge of the Timekeepers and have to guide the platoon through the levels, avoiding the obstacles placed in your way – rivers, minefields, trapdoors and 'the enemy' will all prove treacherous. When your men find the nuclear devices you will have to instruct them to disarm them, and the amount of men you need to do this depends on the complexity of the device. The number in your platoon also depends on how many men survived the last level.

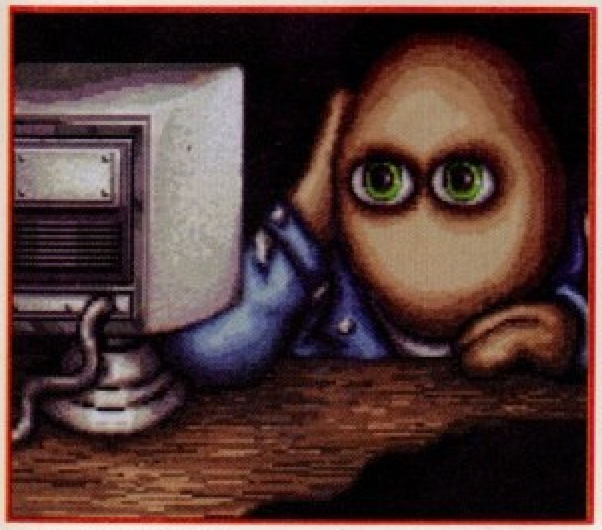
ACTIONS

The characters act independently to given situations and while they have a certain degree of intelligence, they also act with a great deal of stupidity! On the one hand, they will walk into even the most obvious disasters, but on the other, if you issue them with an impossible order they will look up in disbelief and walk in the opposite direction. They will also do this if they bump into another member of the platoon.

The game will be controlled via an icon system (see boxout) and when all 16 levels have been explored, and the four bombs disposed of, the game is finished. Fans of the game will then be able to purchase a data disk providing an extra 64-level challenge.

Vulcan Software divided the games-playing world with their last releases, so much so that scores ranged from the low 20s to an amazing 90. Although a puzzler game, it does look distinctively 'Vulcan,' so it will be very interesting to see whether Timekeepers has the same effect on reviewers and public alike.

Timekeepers will be available this summer for all Amigas and we'll hopefully be bringing you the full review next month.



The intro animation puts you in the picture



These strange creatures are the Timekeepers – at the ready to take on the mission

Virocop



The 3D environment works well and you'll have to make sure you don't fall down grassy banks or off roof tops



Here is one of the deadly viruses and you must kill a certain amount to get off the level

INTRODUCTION

First impressions of shoot-'em-up Virocop would suggest a fairly young audience. However, further investigation of the game reveals more to it than first appears. It's a mixture of shooter/platformer – a genre that has somehow been neglected on the Amiga of late – and has been created with such fine attention to detail that it looks set to shine.

Behind the game are the talented Graftgold team, renowned for such hits as Uridium, Fire and Ice, and Rainbow Islands.

PLAYABILITY

As you can imagine, the majority of the game involves negotiating platforms and blasting the enemies and viruses into oblivion. There are a range of 20 different weapons at your disposal, from twin missile launchers to flame-throwers. The shots you'll need to kill an enemy depend on the size and strength of it. Some may be killed with one straight bullet, others with a mortar bomb, for example.

To finish a level you must exterminate a certain amount of viruses, so the game can be played in either of two ways. One is to rush through all the levels, avoiding enemy fire and



All the levels are themed and contain enemies appropriate to the level



A great deal of attention to detail has been paid to the graphics

GRAPHICS

Graphics are of an extremely high standard and an excellent 3D environment not only looks good but enhances the gameplay. Each level varies from the Sports zone to Military, and all contain enemies appropriate to the theme. Sports, for example, contains deadly snooker balls and animated enemies related to the level. There are also men bouncing around the zone on space hoppers – remember them? Round, plastic bubble creatures filled with air that you could hop around on.

All levels look good but the adventure scenario, which is the bonus level for the A1200, is particularly good and has a mixture of wizards and evil robots. Even small details such as flame torches burning on the walls show the attention to detail that has been given.

The main sprite is fairly basic and looks rather like a banana-coloured R2D2! Still, he has been rather nicely animated despite his small dimensions so that, for example, if you leave him standing, he lets off steam. His moves actually look robotic too and as his head moves independently to his body, which is the firing part, it adds to the gameplay!!

83%

SOUND

Sound-wise, Virocop is nothing exceptional. You are offered the choice between in-game music or just the sound effects. The music changes to fit in with the levels and varies from the predictable happy-go-lucky bounce-along tunes for the Sports level, to the more dramatic such as on the Adventure level.

Stereo sound is available when the music is switched off, so the effects are routed to the left or right channel depending on the event on screen. Most of the sound effects, as you'd expect, are a range of shots, bangs and explosions, but apart from that it is quite limited.

45%



As the levels progress, things get harder and more chaotic

stopping to kill just the viruses, or you can go at a more slower pace and kill baddies as you see them. However, the more points you earn, the more chance you have of earning an extra life. Bonus lives can be discovered on the levels and are also awarded at 10,000, 40,000 points and so on.

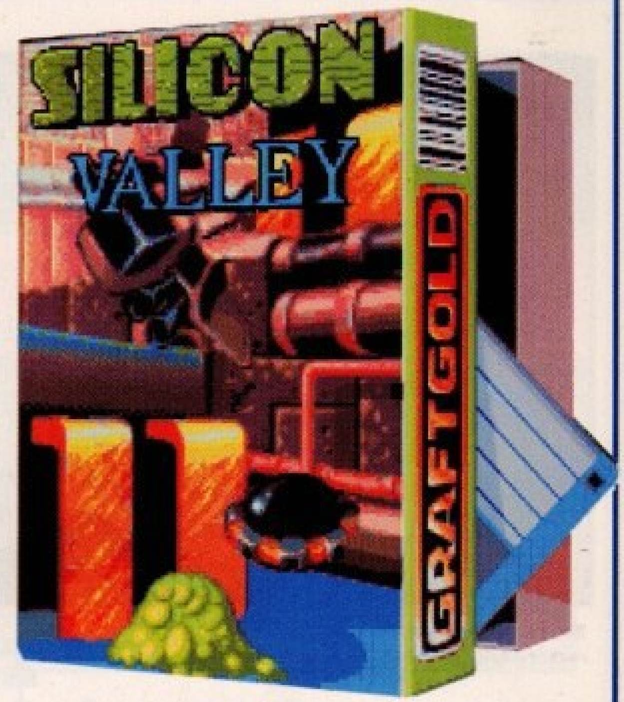
D.A.V.E. runs on a battery which is drained as he is damaged. Pick-ups can be collected to replenish it and you'll need to be able to judge when you need them as you can't collect energy you can't use. There's also some kind of puzzle angle to the game as you have to figure out how to move certain platforms and which switches do what.

STORYLINE

Virocop sets the scenario of a virtual-holiday theme park. You play D.A.V.E. – Digital Armoured Virus Exterminator – who has been given the arduous task of ridding the park of viruses that have taken over and are causing havoc on the game Disk.

The game zones had been set up on the GameDisk 12 years ago and the public and press were sceptical about the idea of buying virtual time-share experiences in another place without having to go there. The concept eventually caught on though, and soon imitations were springing up everywhere, although none were as big as the GameDisk.

But then it all goes horribly wrong when something breaks into the GameDisk. Giant viruses spread across the game zones feeding off the power, and spreading rapidly all the time. D.A.V.E, the Virocop is called for.



Usually the best cure for a virus is bed rest, TLC and chicken soup. But when a computer gets sick a more radical remedy is required. Tina Hackett introduces D.A.V.E, the robotic hero of Grafgold's latest

- Publisher: Warner Interactive
- Developer: Graftgold
- Disks: 3
- Price: £25.99
- Genre: Platformer/Shoot-'em-up
- Hard disk install: Yes
- Control system: Keyboard/Joystick/Joypad
- Supports: A500 1Mb/ A1200
- Recommended: 68000 upwards



Each scenario represents a different adventure in the holiday park, therefore providing variety



The main sprite is pretty basic but still packs some nice animation

FLASHBACK

There isn't really a game like Virocop to compare it to. It's a cross between a shoot-'em-up and a platformer, and the nearest I can think of to describe Virocop is a cutesy Alien Breed. According to older colleagues, there was a similar game on the C64 some years ago – although no-one can remember its name!



There are a range of weapons available and each enemy requires a different approach

OPINION

85%

Virocop comes across as a very polished game and what it doesn't have in sophistication, it makes up for in gameplay.

Two-player mode, though, is by far the best option. As well as the usual turn-based system, you have a team mode where one player takes charge of the head and firing while the other controls the body and movement. At first this takes some getting used to, but as you progress this is definitely one of the most fun multi-player methods I've played.

Virocop is not the sort of game that will grab you immediately as it isn't particularly striking, but play it for a while and try the two-player team mode and you'll find a game that has playability in abundance.

It's not the 'thinking man's' title by any stretch of the imagination, but for the trigger happy this is a title of high quality and provides a great long-term challenge.

AMIGA GOLD AWARD

Publisher: Domark
Developer: Domark
Disks: 2
Price: £29.99
Genre: Race sim
Hard disk install: N/A
Control system: Joystick
Supports: All Amigas
Recommended: 68000



Your team kits out the car in a rather mediocre piece of animation



Weather predictions are important when it comes to choosing the right tyres



The battle for first place feels more realistic than in many other racing simulators

F1 World Ch

INTRODUCTION

With Skidmarks, ATR and Roadkill behind us, and Turbotrax and Wheelspin still to come, it seems Amiga developers have forgotten how to program anything other than the overhead racer. Many of them boast tried and tested quality gameplay, but this constant rehash of the same product must be tiring even the most dedicated fan of the genre.

A change is long overdue, so the imminent release of F1 World Championship has raised some interest. It's certainly not a breath of fresh air in terms of originality, but at least it marks the return of the long-absent race simulator with its realistic on-the-track view.

Power ups, wacky cars and off-road scenery have been abandoned in F1 World Championship in favour of realistic racing with pit stop tactics. The question is, can Domark make the old formula shine once more?

PLAYABILITY

No one is going to be impressed with F1 World Championship from the word go – not unless they've only just upgraded from a C64 anyway. It's done nothing to build on the racing game graphics of years past, and initially it seems to offer little more in terms of gameplay either.

Despite these strong criticisms, however, F1 somehow manages to draw the player back for more, thanks to more depth in the gameplay than initially meets the eye.

The fact that the tracks are modelled realistically on their real world counterparts is an attractive feature that should appeal, particularly to Grand Prix fans. Even if you've never watched motor sports in your life, however, the variety of challenges from simple fast circuits like Brazil San Paulo to the tortuous bends of Monaco add an extra dimension to the challenge.

Unlike most racing games – including the state-of-the-art arcade hit Daytona Racing – this title actually gives some sense of the tactics of motor sport. Passing cars, for example, can be a matter of bidding your time until the right opportunity arises, because on a crowded stretch the player simply won't be able to overtake as soon as they want to.

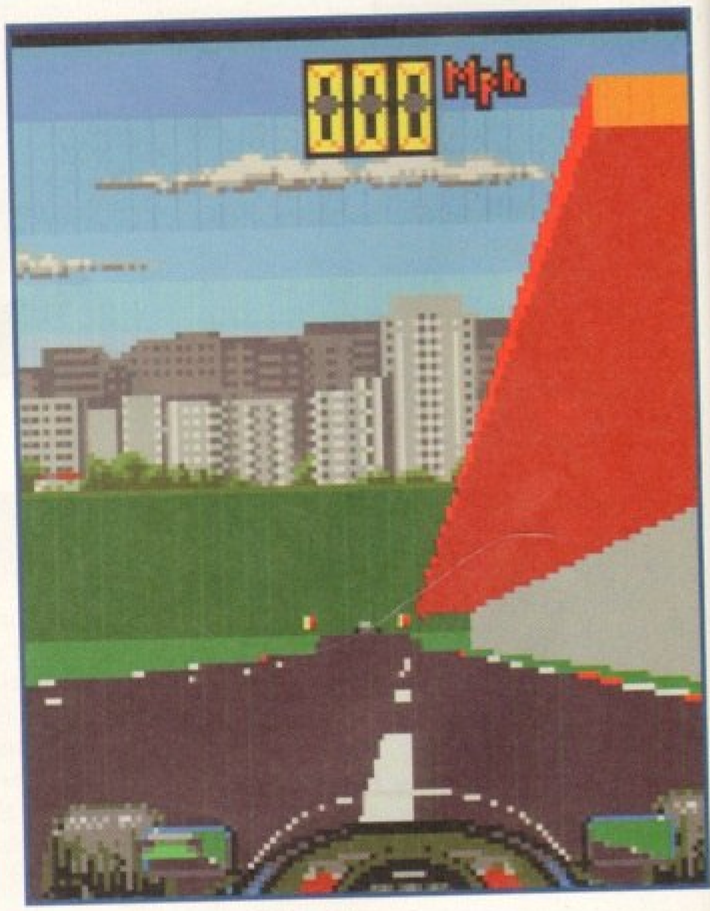
Before the race begins, players are advised to consult the weather report and the map of the track as this will affect the way the car should be set up. Drivers can choose different tyres to suit weather conditions and varying drag-factors to trade off speed for grip on the more arduous circuits.

The handling of the car, however, is perhaps the most important matter when it comes to making a successful racing game, and fortunately F1 is reasonably accomplished in this area. Unlike some games which demand that the player goes flat out round the circuit to even have a chance of winning, a driver in F1 has to get used to anticipating tight bends by breaking. Other realistic touches include the need to refuel and change worn tyres – otherwise you'll be forced to retire.

Different game modes allow players to race in knockout contests or go for longer-term championships in which there is both a driver and a car constructors' scoreboard. This, again, adds a touch of strategy to the action, because the thought of maintaining points will make players think twice about racing on with worn tyres just to snatch first place.

Incidentally, we actually dug out a Logic Freewheel and some foot pedals and connected them to F1. Not surprisingly this wasn't a totally satisfying experiment, though they did work to a certain extent.

80%



Pit stops are vital to refuel or change a tyre before it becomes too worn

After the recent glut of overhead race-'em-ups, the 3D race simulator makes a return in the form of Domark's latest release. Gareth Lofthouse tests whether F1 World Championship has got enough juice to snatch pole position



The chequered flag – whether this comes after five, 10, or 20 laps is decided by the player

SOUND

Racing games just don't seem to inspire the average developer when it comes to audio effects. Providing they've got some impression of the roar of the engine, they don't seem to bother with much else – the only notable recent exception being Roadkill with its more original background sound.

F1 isn't terrible but the engine noise is more of a buzz than a 'vroom' and crashes sound more like a tinkle than the noise of tearing metal. Other effects include skidding and a tinny clanking when bumping into opposition cars. What is quite satisfying, however, is the convincing sound effect that accompanies a gear change – trivial it may be, but it actually makes the player feel more in control of the car

48%

ampionship Edition

GRAPHICS

We might have hoped that the Amiga's capabilities would have been squeezed to push F1 to the forefront graphically – after all, visuals are fairly important in such an action-dominated genre – but unfortunately, Domark's efforts on this front are at best average.

The problem is that it all looks rather dated. In the far distance, buildings rotate as you turn through bends, and signposts and barriers rush by on the edge of the track, but it fails to give the impression of racing through anything remotely like a real landscape.

The lack of detail isn't entirely a bad thing, however, since it's allowed the game to run at a high speed. This means that though the scenery is rather basic, it blurs by at such a blistering rate that your attention is firmly centred on just holding onto the road.

Initially, it appears that the tracks are going to be flat, but on later levels players do get the impression of rising and falling over small hills and dips – though since these are based on proper race tracks this effect is not overly dramatic. Furthermore, because the races take place all around the world, the developers have introduced a reasonable amount of variety from location to location.

There are also appropriate weather conditions for each of the countries, so races can take place in bright sunlight, driving rain or under overcast skies – but though this works well in terms of gameplay, it's crudely implemented as far as graphics are concerned.

Another complaint can be levelled at the poorly detailed cars – however, at least your driver's hands move on the wheel and it's possible to view the action from within or behind the player's car.

Two-player mode works using the standard horizontally-split screen and appears to maintain all the pace of the one-player challenge – a quality not to be sniffed at when you consider how important human versus human games are in the racing genre.

Other functional but effective graphic features include the track map which shows the player's car in red in contrast to all the other cars. This facility gives drivers a good idea of how clear they are from the rest of the field – or, more usually, how much work they have to do to catch up.

The introductions, the pit stops, option screens and all the other wrapping material that surrounds a game in F1 are typically unimpressive too, especially when compared to the stunningly rendered introduction accompanying Roadkill. But then at the end of the day, it's the game itself that counts.

50%



Crashes are none too spectacular, but they hold drivers back enough to add tension to the game

OPINION

78%

AMIGA SILVER AWARD

Domark would have done this game a lot more justice if they insisted on having the graphics and sound brought up to date, because deep down there's actually an enjoyable game to be played.

Unfortunately, a lot of people won't bother to persevere with F1 because it seems so visually slap dash. Those who are unmotivated by the gloss of most modern games, however, can find a racing challenge that holds more than average levels of tactical depth.

Nevertheless, the Amiga market needed a more rounded title to lift the standard of action gaming at the moment, and F1 just doesn't deliver. Beating Microprose's similarly-named racing game was always going to be tough, and unfortunately Domark just weren't up to it on this occasion.

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Blitz Blanker is another tool that requires the services of MUI (U499). This is an excellent modulerised screen blanker similar to GBlanker.
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wow! This is great and lasts for ages
D148 URBAN "SOME JUSTICE '94" AGA
this has a superb soundtrack. Must be heard!
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one of the best AGA demos this month
D168 DUPLO "MY MAMMA IS A VAMPIRE" [2D] AGA
an excellent, very long demo from Duplo
D169 FREEZERS "WIT PREMIUM" AGA
The best AGA demo from November - get this!
D177 DIGITAL "ETERNAL MADNESS" [AGA] [2 DISKS]
released after the party, very nice! [1MB FAST RAM+]
D178 VIRTUAL DREAMS "PSYCHEDELIC" [AGA] [3 D]
voted 2nd at the party. Outstanding routines! [HD only]
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wow! The very best tunnel-sequence ever! Amazing.
D180 OXYRON "KILLING TIME" [AGA] [4 DISKS]
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very, very original! Buy it and be impressed!
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D189 ANDROMEDA "NEXUS 7"
voted 1st at the Party 94! Absolute must!
D190 REBELS "WHAMMER SLAMMER" [AGA] [3 D]
Rebels produce superb demos! This is no exception!
D191 BOMB "MOTION ORIGIN 2" [AGA] [2 DISKS]
has the best Doom part ever! Irrisistable demo!
D195 ABYSS "DOVE" [2 DISKS]
a pretty good demo from the Party '94.
D196 TRSI "THE CUBIC DREAM" AGA [2 DISKS]
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Very good demo from Faculty - needs loads of Mem!
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D221 FREEZERS "LECH" AGA
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D223 IMPACT DK "MELCHOIR" [HD] [6MB+]

GAMES

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GM76 SCRABBLE
GM78 STARWOIDS [1MB] [2 DISKS]
thrust and olds mixed - very addictive game
GM97 TOP HAT WILLY
an Amiga "Jet Set Willy" rip-off. Addictive!
GM105 DYNAMITE WARRIORS 2
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yes, two please!! A Lemmings type game. Direct your little men (with different skills) to the end.
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one of the best Tetris games on the Amiga.
GM125 KELLOGS LAND [AGA]
WOW! The very best PD platform game ever!
GM126 SUPER MEGA FRUITS
a good Fruit Machine game.
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superb! The C64 classic now comes to the Amiga!
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this is an amusing Street Fighter clone. Good!
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another super-sprint clone. Multi-player racing.
GM136 CYBERMAN
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GM138 INTERNAL COMBUSTION
great skidmarks-esque multi-player racing game
GM141 MADHOUSE [2 DISKS]
a graphical adventure game
GM147 DELUXE GALAGA v2.51
must be the best PD shoot-em-up ever made!
GM148 CLASSIC PUCMAN
classic Pacman as it was originally designed
GM149 AMIGA DEMON v1
poker card game for the Amiga
GM150 ROCKETZ V2.25 [AGA]
superb AGA only 2-player thrust/shoot-em-up game
GM151 INFECTION
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GM152 JUMP 'UM
guide Spud through the levels to reach his cheque
GM153 BOING V3
decent thing-on-a-spring type platform game
GM157 MASTER BLASTER
similar to Dyna-warriors - 2 player bomb game
GM158 THINK A MANIA [WB2+]
superb snap game with excellent graphics
GM161 OOZE AGA [2 DISKS]
ooze is sooo addictive. 2 player infection game!
GM162 OOZE ECS
GM164 CYBERGAMES [2 DISKS]
excellent! A street-fighter clone with gore! This is probably the best beat-em-up games in the Public Domain.
GM165 PUNTER v1.0
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Compulsive 2 player split screen blaster. Great!
GM167 ACE THE SPACE CASE
Top notch platform romp, commercial standard.
GM168 SCAVENGE [WB3+]
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GM169 MASH
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excellent tank-war sim
GM176 ALIEN GENOCIDE [2 DISKS]
err. A Operation Wolf clone?
GM178 DOOMER (AGA) (HD ONLY)
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GM180 CARNAGE
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GM184 SCREECH
another car racing game
GM185 BOARD GAMES
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GM195 BATTLE DUEL ECS [WB2+]
ECS version of the above
GM226 GLOOM [AGA]
A demo version of the forthcoming Doom clone.
GM227 WAR OF THE WORLDS 4 [AGA]
A virtual reality program on the Amiga?
GM228 KING HIGH
A new card game
GM230 DOMINOES
A game of dedication and a little cunning.
GM233 SUPREME FIGHTER
Beat-em-up with funny Spectrum style graphics.
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Active Software and Ground Zero Software, the leaders in the very latest Amiga public domain, announce the release of the best CD this year - ZOOM. Zoom not only contains the latest PD from all over the country, the Aminet and BBS sources it also contains some exclusive products which will appear on the CD before they appeared in our adverts or any other PD libraries advert. The interface is a custom-written, GUI based design, coded by the author of the famous disk magazine Deadlock. Select the file you want to read about, read the information then click to de-compress! Easy as that. Over 540MB of data, (over 1.1 GIGs of uncompressed files) offering the user access to 1000+ of disks! Must be one of the most comprehensive CD's this year!

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CD-Rom Comparison Chart

	Zoom	Hottest 5	Phase 4
Over 540MB of Data	✓		
Easy to Use GUI	✓		✓
Over 1000 Disks	✓		
Very Latest PD	✓		
Outstanding Value	✓		✓
Free Booklet		✓	

- The latest PD from December to June: Utilities, games, demos, slideshows, education, disk mags and more!
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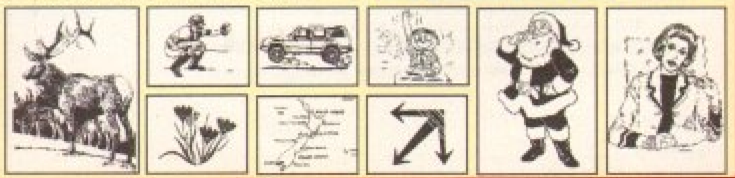
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INTRODUCTION

Tactical Manager dates back to 1992 when Talking Birds released a very statistical football management game under the name of Football Tactician. This was a fairly exciting introduction by a relatively new company who had planned to be a huge success in the Amiga market.

The amount of statistics and detail was almost certainly the main attraction – followed by intense gameplay and lastability. The idea was to produce an in-depth, realistic football management game which was more like a database of statistics rather than a presentational feast littered with gorgeous graphics and sound. A no-frills management game was their aim, and their aim has just been reached.



Tactical Manager 1 had rather a clumsy menu system. Now, Tactical Manager 2 sees the introduction of easy-to-use icons



An abundance of player information is included. A player's complete history can be now altered

Tactical

Take control of incomprehensible Kenny's champions or forlorn Ferguson's unavailing United, leading only one to Premiership glory. Andy Maddock gives it a go.



John Salako puts the mighty Eagles into the lead – a right foot volley that crashed into the net



A particularly boring match which ended in a one-all draw. Wait, I had this match on my pools coupon!

GRAPHICS



Although football games don't always require amazing graphics, they do add a little spice to the overall finish. They are certainly not the main feature in Tactical Manager 2, but serve their purpose adequately – ranging from club logos to main pictures which accompany the action as you battle out the match sequences.

If you wish to set up an entire fantasy league of completely fictional teams then you may do so using the edit club logos option.

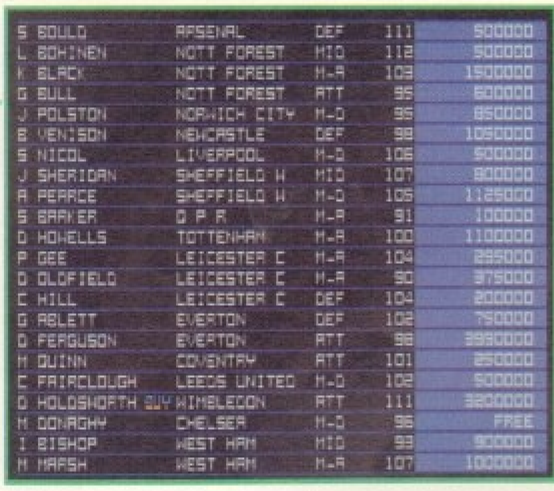
Incidentally, you can completely alter each players' statistics in the Premier League and Division 1 – their age, nationality, morale and fitness are only a few which can be changed. Also, any transfers that may take place in the future can be entered with the utmost of ease, meaning your version of Tactical Manager will never fall out of date. Overall, the graphics are simple and relevant to the action, and display the information suitably as and when it's required.



51%



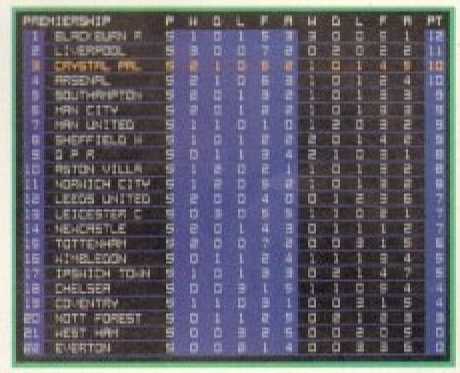
Customise your squad to the extreme by moving players in and out of positions



The transfer market is the perfect place to pick up players out of contract



The all-important match day programme. No Saturday is complete without one



The league table is easy to read, unlike many other management games which have numbers littered everywhere!

Manager 2

ADDITIONAL INFO

The game is already very successful among Play-By-Mail users. This is a postal football management game which hundreds of people enter, trying to take their team to Premiership glory. This is how it works.

The author of a Play-By-Mail will recruit managers to play in the league, appointing them to various teams. The idea for the public is to transact through the author to win the league. Once the public has selected their team formations and changes they return the information back to the author – who inputs all the data on to Tactical Manager 2. The results will be determined and then sent back to the public to inform them of their position within the game.

Why? you may be asking. Well, it's a special blend of the love of English football and money. Yes, it does cost to take part in these leagues – sometimes as little as £1 every week. Tactical Manager can be used as a starter to help you run one of these leagues. Instead of the usual four-player option you find in the football management games of today, 40 people can easily be entered to play one game of Tactical Manager 2.

Publisher: Kompart/Black Legend
Developer: Talking Birds
Disks: 2
Price: £29.99
Genre: Football Management Sim
HD Install: Yes
Control System: Mouse
Supports: All Amigas
Recommended: 68000

SOUND

The sound merely consists of either huge cheers when your team scores or a small beep when you select various options. Once again, basic, yet effective in its simplicity.

48%



All the statistics you can think of will be on the match screen – more importantly though, the actual score

OPINION

76%

Although the graphics and sound are of an average standard, the sheer depth of the game is where it all begins to change.

The intensity to which Tactical Manager stretches is enormous. You'll spend endless hours searching through the many menus to change various aspects for your next game. Everything you find in real football is here – and very realistically too. All the basic aspects of football are obviously included, and team selections and transfers are just the tip of the iceberg.

You can select any players on your team to act as either ball-winners, playmakers or goal-hangers, and you even get to select one of the opposing players to mark – to completely put him out of the game.

One strange feature that has never been included in any game of this genre before is the Pools – you can choose home wins, away wins and draws to come up with the jackpot. The amount of detail in this game is unexplainable and cannot be described on these two pages alone, and this is what makes it so special.



Most people will turn their nose up at the first sight of Tactical Manager 2 and the immediate impression will be reasonably bad because of the way it looks. Anyone who takes the time to get into the actual game itself will realise what hidden talent it possesses.

Real football fanatics who would be interested in all the realism and statistical features of football will love it to death. The amount of detail is astonishing, probably the most in-depth I've ever seen in any football management simulation yet. The presentation may not be as polished as say, On The Ball or Premier Manager, but for detail, Tactical Manager comes top of the league.



Small comments are made throughout the commentary. Fights, angry players and crowds invading pitches are all mentioned during a season

Obsession

Obsession, far from being the latest after shave from Calvin Klein, is a pinballer from Swedish team, Unique Developments. Pinball Wizard Tina Hackett takes a look

INTRODUCTION

Digital Illusions series of pinball games have somewhat ruled the roost as far as Amiga pinball games go – some have even hailed them as *the* definitive pinballers. So maybe it comes as a bit of a surprise then to learn of a new challenger on the market from Swedish team, Unique Developments, with Amiga development from Blade. The game originally came out on the ST and I happened to review it for St Review magazine. Back then I awarded it a massive 98 per cent, and said it was 'the best ST game ever!' so I awaited the Amiga version with glee.

However, the Amiga market is another kettle of fish altogether, and after being spoilt by Digital Illusions previous offerings, I wasn't quite sure where Obsession would fit in with the state of play. So to be fair when marking this game, it has to be scored in relation to others available.



Flippers at the ready as you ping the ball around the Aquatic Adventure table



To finish a stage on Desert Run you must light the pit stop lamps, but make sure you've bought enough fuel units first

MISSIONS

Desert Run: You are racing from Paris to Dakar and to finish a stage you must light the pit stop lamps, but to light a lamp you have to buy enough fuel units. Money will be given to you at two stages – the Hundring Ramp and the Speed Passage. To get a really high score, though, you must finish each stage as either the first or second car, and to increase your place in the race you need to go through the Place Passage.

Balls and Bats: Two-play modes are available for this Baseball-themed game. In Normal Mode you just play the ball around the table, collecting a score. In Pitching Mode you shoot the ball into the Pitcher's Box which halts the game for a few seconds and the Pitcher throws the ball at you, either as a Fast Ball, Slow Ball or Curve Ball. You must then use the flippers as bats to hit the ball.

X-ile Zone: On this table you have a series of missions to complete before you can go ahead and kill the enemy tribe leader. The nine missions are displayed in the middle of the table and to complete one you must light 'Death' and shoot the ball into the Mission Ball Trap.

Aquatic Adventure: Try and spell 'Dive' and then you can go onto to do one of two things. You can either increase the Bonus Multiplier at the bottom of the table or enter a Dive Mission where there are five to complete, from Deep Dive to Submarine Hunt. The Starfish ball trap also gives extra awards such as bonus points or an extra ball.

STORYLINE

Aquatic Adventure is, believe it or not, a sea-related table and tells the story of Bobby Bubble, an adventurer who has escaped from Captain Notpolites dungeons, stolen his map and his heading for the Sitnalta archipelagos. He ends up on a strange island and takes a dive into the waters. He then has to find the treasure before he ends up as fish food. But little does he realise that the Captain is watching him from his submarine.

X-ile Zone, on the other hand, is a futuristic table. It's set in 2058 after a nuke attack and your mission is to kill the enemy leader, after completing a number of missions.

Balls and Bats has a sporty theme and puts you in the role of a world-class baseball player. You are taking part in the World Series – the pressure is on and the whole team are counting on you.

Desert Run deals with life in the fast lane. You must get from Paris to Dakar as you leave the roads and try to earn the title 'Desert Runner.'

SOUND

Again, these are fitting to the theme of the table such as the dark, moody X-ile Zone which has a mysterious introduction tune and then as the ball sets off around the table, a louder beat kicks in.

A nice range of voice samples have also been included, for example, in Balls and Bats you get the Americanised baseball slogan 'Play Ball' or 'Strike.' Sound effects such as the flippers hitting the ball and bells ringing when you hit certain lights work well too.

78%

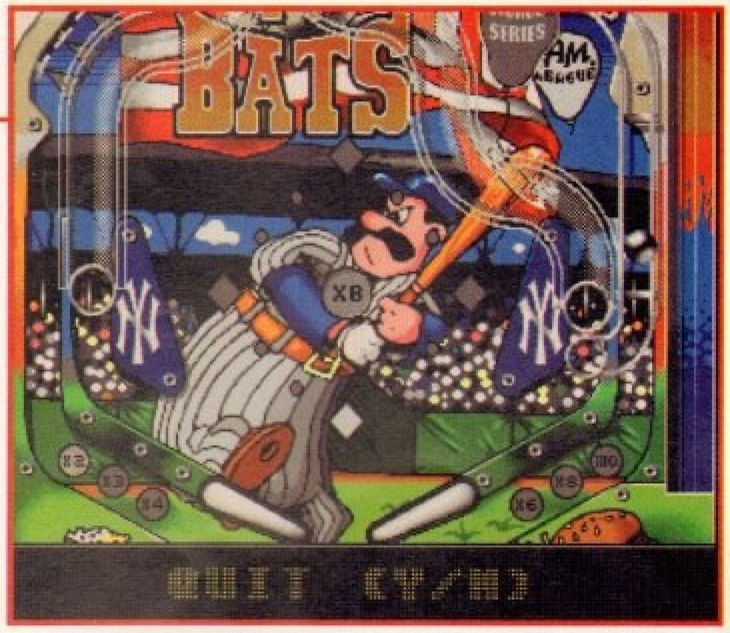
FLASHBACK

Other pinball games available for the Amiga are from Digital Illusions and these have sold in abundance and gained many fans. Obsession is an excellent game in its own right, but I'm afraid it is let down against Pinball Illusions because it doesn't have multi-ball. Also, an extra set of flippers, even on just one table, would made a hell of a lot of difference. Music, although very impressive, isn't as good.

Saying that, though, the graphics are very impressive for a game of this nature, especially as this is isn't the AGA version.



The dark, gloomy atmosphere of X-ile Zone is a good contrast to the other tables



The graffiti-style artwork works well and each design is extremely detailed

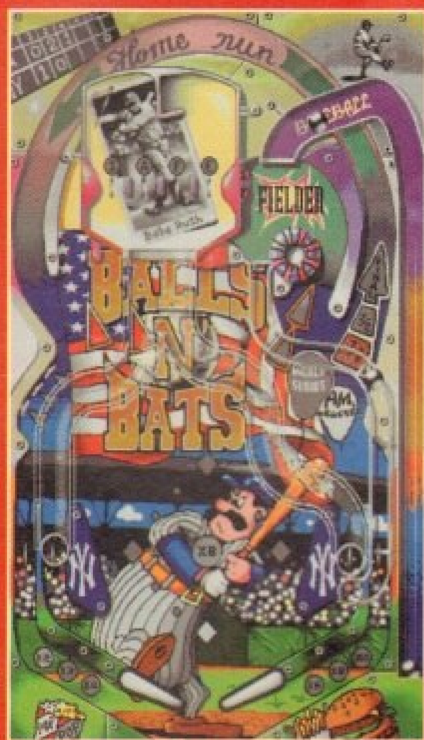
The full tables in all their glory



Aquatic Adventure – help Bobby Bubble find the hidden treasure



X-ile Zone – the scene of a nuclear attack. You must find and kill the tribe leader



Balls and Bats – can you win the World Series?



Desert Run – not for Sunday drivers this one! The title of 'Desert Runner' is up for grabs

GRAPHICS

There are four tables available and each has a different theme, varying immensely from the dark, foreboding atmosphere of X-ile Zone to the jovial Sports theme.

Each table is bright and colourful and are pieces of art in their own right – well in a 'streetwise' way! This is because of the airbrushed look that is reminiscent of graffiti art or even pop art. The overall effect is of a very modern style and all work brilliantly as backdrops for this sort of game. The tracks for the balls have been well designed too and provide an exciting challenge for the player, as well as being clearly set out so as not to cause confusion. Animations, lights and traps all add to the realism.

85%

- Publisher: Merlin
- Developer: Unique Developments/Blade
- Disks: 2
- Price: £29.99
- Genre: Pinballer
- Hard disk install: Yes
- Control system: Keyboard
- Supports: All Amigas 1Mb+
- Recommended: 68000 upwards

OPINION

87%

This is a very able pinballer, it has to be said. It doesn't have the glamour of Pinball Illusions, but it certainly gives it a run for its money.

Obsession comes across as a very authentic pin game. The ball moves at the right speed and feels like the correct weight, flippers respond well to the keyboard controls and the tilt feature – left, right and middle – works nicely.

The eight-player mode allows for some excellent multi-player competitions and there are a good deal of missions per table. Other than the objectives I've briefly mentioned here, there are also 'special' aims that will earn you extra bonuses. It all makes the game highly addictive and lasts even the pinball wizards a good while.

This version is available for all Amigas, though a new AGA version is promised soon.

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U046 DARKSTAR no.2 (vol 2-5) loads of utils
U058 DISK MAG CREATOR create a disk magazine
U117 NORTH C compiler (2) brill programming language
U122 SID 1.6 copy/delete/move file made very easy
U131 TETRA COPY play Tetris while copying disk, great
U135 MOST USED UTILITIES (2) very useful util collection
U145 XCOPY PROFESSIONAL very powerful disk copier
U146 C-MANUAL 2 (4) Teaches you how to program in C
U153 ASSASIGN PRINTER Utilities very useful
U169 PAINT AND ANIMATE still the best
U170 BIORHYTHMS V4.01 display your own biorhythms
U184 MASTER SEKA V1.6 complete Assembler language
U186 UNLIMITED DISK CREATOR all tools on are here
U187 M COMPUTER AID DESIGN - Was commercial product
U188 SHOWIZ slide show maker 24+ wipe effect
U191 SID II copy/delete/move/run file using a mouse
U220 AMOS-PAINT V. good paint package, lots of features
U222 GRAPHICS UTILITY(3) lot of graphic converter tools
U225 AUDIO SOUND TOOL (A500) (A1200)
U226 50+ MOST USE UTIL loads of very useful utils
U229 SLIDE-SHOW CONSTRUCTION KIT easy to make
U240 ARCHIVER TOOLS lots of crunchers
U242 IMPLODER 4.0 disk file compressor. Excellent
U243 The A-T COPIER (not WB3) 13 disk copier
U254 FRACTAL UTIL loads of fractal programs, brill
U257 DISK CRUNCH Compilation not WB 2
U262 LAND BUILDER create realistic landscapes
U264 COPY & CRACK TOOLS back up your software
U287 P.C. Q PASCAL (2 disks) programming language
U300 MESSY SID II read/write PC/MAC etc files.
U301 AUTO DISK LOGGER catalogue your disk
U321 GRAPHIC Util 1 (3) loads of brill graphic utils
U324 GRAPHIC util 2 (3) even more Graphic tools
U333 SCENERY MAKER more landscape generators
U334 EMULATOR COLLECTION II (lots of emulators)
U335 FREE COPY back up commercial games
U337 MODEL 3D Brilliant 3D object designer
U338 MULTI VISION (2) disk/files utilities
U343 HACKER-TOOLS many ripper tools
U350 POOL TOOL - predict horses with the best chance
U356 STAR CAT 2 - create catalogue disk, easy
U359 SEEKER find lost files on floppy & hard drive
U363 R.P.G (2) adventure creator
U364 DISK REPAIR KIT 4 - salvage & repair damaged disks
U365 SAMPLE MAKER make samples with out hardware
U367 MUSIC MANIA many version of music maker pro, brill
U372 WORD SORT process ASCII files
U377 NCOMM III more modem software + packer util
U378 DIGITAL ADDRESS BOOK V.good address book
U379 HOT UTILS more amazing utils
U380 UNICOPY fantastic disk copier
U381 GRAPHIC RIPPER (not WB3) plenty
U383 LYAPVNOU GENERATOR- generate space scenery
U384 MED V3.2 (latest) Brill music maker
U387 P-SUITE add colour/animate to text?
U388 SUPER CLI - fast disk, fast load etc. OK
U391 FORTRAN complete programming lanaguage
U392 AMIGA DEX - Good database program + more
U393 UTIL collection of lots of useful utils
U397 FORM UNLIMITED design any type of form
U399 FRACSCAPE V1.2 new fractal similar to VISTA
U400 SOUND TRACKER V2.6 music maker
U401 PLUS ISSUE(not WB1.3) Vol 1-14 each disk pack with various WB2 & WB3 utilities. Recommended
U420 SPEED BENCH (not WB1.3) create auto boot WB
U425 NIB 2 very popular copiers
U436 The RIPPER COLLECTION (not WB3) many ripper programs
U440 RADBENCH recoverable WB (state Amiga when order)
U442 SYSINFO test & print info on your AMIGA sys
U444 FONT FARM font creator/editor/design new fonts
U449 AMOS UPDATE 1.4 add more commands for AMOS
U457 WHOM 2 (3 DISKS) Detail/database on 51 films
U470 FINAL FONTIER 1 (2 disks) Star-trek magazine
U473 FINAL FONTIER 3 (4 disks) Star-trek magazine
U480 HARD DISK CLICK - Hard Drive menu system
U490 B-TEC UTIL - Amazing pack with 207 utilities
U491 PROTRACKER V3 - Best music writer program
U492 WORK-STATION (2 disks WB1.3 only) WB replacement
U495 HARD DISK UTIL brill collection of Hard disk util
U496 EASY PRINT (A500 only) lots of printing utils
U498 WORK-MATE - 15 brilliant disk utils compilation
U501 THE MUSIC CONSTRUCTION KIT (state Amiga owned)
U502 SCORPION MAPPER II Making maps of game levels
U503 PROCALC Super full function Calculator
U504 HOT-STUFF - more util disk compilations
U505 VIRUS-KILLER & DISK RESALVAGE/REPAIRE KIT
U507 DCOPY V3 PROFESSIONAL - Exellent Disk copier
U509 ULT BOOT BLOCK 40+bootblock generator/maker
U510 ULTIMATE BOOTBLOCK Collection II + more
U512 ZIRCON UTIL - 30 MOST USEFUL UTIL 2, brillant
U515 WIT COMPLETE UTIL 20 most used utils
U516 AMOS FRACTAL fractal manis
U521 SPECTRA PAINT III rival to Dpaint
U542 SEA HORSE CHEATS more cheat/passwords etc
U550 SCENERY CONSTRUCTION KIT freeware, recommended
U551 ASSASSIN BOOT BLOCK over 50 bootblock protector
U555 CROSSWORD CREATOR (not WB3) crossword maker
U561 PERM CHECK a full POOL PREDICTION program
U568 ICON CONSTRUCTION KIT icon making program
U569 ICON ready made (4 disks)
U582 DPAINT GRAPHIC TUTOR (not WB3) excellent
U584 NEW SUPER KILLER Regonise & kill 120+ viruses
U590 600 NUMERIC PAD EMULATOR (A600 only)
U591 DEGRADER (not WB 1.3) A500 emulator
U592 KILL AGA - make older programs run on A1200
U600 C64 EMULATOR II util & document
U601 DISKSALV II + ABACKUP (not WB1.3)
U603 THE CHEAT COMPENDIUM for over 450 games
U620 HOW TO CODE IN C (2 disks) + many examples
U622 ACTION REPLAY V1.5 - cartridge on disk
U623 ACTION REPLAY V4 (A1200 ONLY) same as above
U645 PC EMULATOR V.2.31 (WB3 only) SVGA PC emulator
U650 COPY & CRACK TOOL 2 more powerful copy program
U669 S-KICK various version of kickstart, recommended
U680 NEW SUPER VIRUS KILLER (not WB1.3) kill 316+ viruses
U682 ASTRO 22 V3 latest Calculate star/sun positions
U685 DISK MANAGER V3 create catalogues of all your disks
U687 AMOS PROFESSIONAL UPDATE added extra command
U689 FORCASTER V2 - horse racing prediction program
U690 ASSASSIN COPIER (lots) includes Xcopy3/dcopy etc
U691 ASSASSIN HANDY TOOL 2 (500 1.3 only)
U692 ASSASSIN HANDY TOOL 3 more utils
U693 ASSASSIN HANDY TOOL + even more utils
U694 SUPER DUPER 3 (not WB 1.3) fast disk copier
U695 P.C.Q complete Pascal language with compiler
U696 AMTOOL PROFESSIONAL disk database tool
U699 MEGACHEAT V3 - even more game cheats
U700 ANIMATION CONSTRUCTION KIT V1.2 - a good
U702 V MORPH V2 create smooth morph animation
U703 POOL TOOLS 3 (Latest) predicts horse racing
U705 TRONIC CAD - best creative circuit board+examples
U707 GAME TAMER (3 & 4) - (2) Even more games cheats
U708 LAST WILL & TESTAMENT - write your will
U710 PERFECT-PAINT 32 very easy to use paint packages
U713 CDTV v2 PLAYER play CDs while in workbench
U714 ENGINEER KIT various test kits for Amigas
U716 MAGNUM 1.9 REGARD the best disk magazines creator
U721 FONT FARM V3 + loads of fonts + font viewer
U723 EXOTIC RIPPER rates as the best sound/graphics ripper
U724 PARNET SET UP (2) requires for the connection
U725 PARNET CABLE MAKER INSTRUCTION project save ££££s
U726 AREX MANUAL (not WB1.3) complete manual. Highly rec
U729 ASSASSIN BOOT UTIL 50 boot block creator utility
U730 SOFT ACA (A500 plus or A600) & min 1.5 meg
U731 A - Z GAMES CHEAT for over 500 games
U732 MINI MORPHS create TERMINATOR 2 effect
U736 AWARD MAKER hundreds of ready made, brilliant
U737 ASSASSIN CRUNCH & COPY TOOL (WB 1.3 only)
U738 SYSTEM PROFESSIONAL V3.2 Various versions of K-start
U739 TURBO IMPLODER V3.1 powerful disk cruncher
U740 CROSS DOS 5.1 plus read/write PC<>AMIGA disk
U741 HD-DISK TOOL BOX + many more Disk util recommend
U742 HOW TO CREATE AUTOBOOT DISK complete + util
U743 UTIL. Disk Maker v3. MAKE AUTO BOOT DISK
U744 FRACTAL MANIA-IMAGINE Brilliant collection of fractal
U745 AF WORKBENCH (WB 1.3 ONLY) replacement
U746 20 GARDEN DESIGNER can view from any angle brill
U747 ASTRONY V2 predict star planet prediction
U748 ILLUSIONS DRAWING program like Dpaint
U749 DISK REPAIR 3 (floppy & HD) include soft-protect,
U750 MUSIC CATALOGUE (not A500 1.3) very easy to use
U751 SYSTEM CHECKER TOOL must for any Amiga owner
U752 EPU STACKER double the storage of your DRIVE
U753 HARD DRIVE UTIL+ lot more Hard drive util
U754 PARBENCH installer (complete)
U755 PRO CAD electronic latest circuit board designer
U758 WB MENU LAUNCHER - menu system, easy to use
U760 ICON PLUS (3 DISKS) Hundreds of stunning ICONS
U761 RELOCKIT 1.4 latest WB1.3 emulator
U762 FAKE FAST MEMORY make older software run
U766 MICRO FAX 4 (2) project (build a fax machine)
U777 TELETEXT RECEIVER project. Highly recommended
U781 DOSTRACE V2. display information why some program refuse to run. Also monitor Amiga activity. RECOMMENDED
U783 POOL WINNER (A500 1.3) for all gambers
U784 DMS Pro Compress 2 disks into 1. Brilliant
U785 HARD DISK MEMORY V2 use HD as memory (re MMU)
U790 WINDOW BENCH V2 (WB 2/3) 2 disk new workbench replacement, include lots of useful utilities
U791 COMPUTER DIAGNOSTIC TEST V5 Amiga complete system tester
U800 PRINT A CARD includes many ready made cards, with multi-print V4 lots of printing utils
U805 DISK PRINT print custom disk labels
U806 BANNER V1.5 all banner printing program
U807 FONT & PRINT Loads of utilities to view & print your font collection. RECOMMENDED
U830 POOL WIZARD - (football) prediction
U832 DIVIDEND WINNER - Prediction program for use with LITTLEWOODS, VERNON, ZETTERS etc
U834 FORCASTER 2.02 New Horse prediction prog
U839 AUDIO MAGIC 3 - Proctracker V3 Exotic ripper
U840 AUDIO MAGIC 5 - more music utilities
U841 AUDIO MAGIC 6 - Octamed player etc
U843 C64 EMULATOR V3 (2 DISKS) latest
U848 SPECTRUM EMULATOR V2 - latest
U849 VIC20 Emulator include tons of games
U850 EAGLE PLAYER (2 disks) One of the best music module players. RECOMMENDED
U851 DELI-TRACKER (2 disks) play all music modules format. Recommended
U853 SONIC DRUM KIT V2 Make drum sample
U882 DISK COPY Pack (10 disk copier)
U883 OPTI-Utils Vol 1 - Brilliant collection of 30 disks copier/backup etc. RECOMMENDED
U885 INTUITION BENCHMARK V8.5 (not WB1.3) Complete Amiga system tester. RECOMMENDED
U886 COMPLETE WB UTIL (2 DISKS) One of the best util collection available
U887 DISK REPAIR KIT 4 - Includes disk repair, undelete, sof protect, diskmate, sysinfo, etc
U950 STEREO-SCOPIC V2.a (not A500 1.3) This is the RANDOM DOT STEREOGRAM generator
U951 FORTH PROGRAMMING (NOT WB1.3)
U955 PRO PAGE 3.1 HELP DISK Large help file for pro page users
U956 PRO PAGE TEMPLATE. Tons of ready made
U957 SCALA BACKGROUND (2 disks) Very high quality images for use with Scala
U960 PROGRAM LOADER - New Hard Disk menu
U961 MAGAZINE E issue 3 (2 disks) Excellent disk magazine base entire science fiction
U962 IMAGINE V2 BUDDY SYSTEM (2 Disks) On line help. Must for IMAGINE 2 user
U963 AMOS & AMOS PRO COMMAND EXTENSION
U966 MULTI PRINT 4 includes print manager 2 etc
U967 PRO-GAMBLE - Super Horse prediction program

MUSIC

M001 BEASTY BOYS - We Want Some Pussy songs
M002 MICHAEL JACKSON - Song BAD
M003 DO THE BARTMAN
M005 100 C64 TUNES (not A1200)
M006 BAT-DANCE REMIXED
M017 GUNS & ROSES - YOU'RE CRAZY
M018 MONEY FOR NOTHING - DIRE STRAITS HIT SONG
M027 BLUES HOUSE (2 disks)
M029 SAFE SEX DEMO - Very funny
M031 BETTY BOO (2) needs 2 drives (brilliant)
M058 SGT PEPPER (2D)
M072 MADONNA - Hanky Panky Song
M084 C64 GAMES MUSIC
M115 MAHONEY & KAKTUS 2 - 40 tunes compilation
M123 ADAMS FAMILY
M150 TIFFANNY - I Think We're Alone Now
M171 MADONNA - (Like a Virgin)
M173 JANET JACKSON - RHYTHM NATION
M177 PET SHOP BOYS
M184 SAM FOX (Please Me)
M186 MADONNA (Rescue Me)
M188 JOE LE TAXI
M189 MICHAEL JACKSON (Smoot Criminal)
M194 JESUS ON E's (2 disks)
M205 RAVE - More Rave
M262 A TO Z OF C64 GAMES MUSIC (4) Brilliant
M314 DICK TRACY (Madonna) (2)
M335 STAR TREK & STAR TREK NEXT GENERATION (2)

18 DEMOS

Age 18 and over only
X80 CINDY CRAWFORD (2)
X74 MADONNA (SEX) (3)
X01 SHOWER GIRL
X03 BODY TALK (2)
X09 MARIE WHITTAKER
X24 SABRINA SPECIAL
X25 DIE FILKINGER
X26 MADONNA EARLY DAYS
X28 KATHY LLOYD
X30 MEGA-MAID
X31 CALENDAR GIRL
X32 MAYFAIR
X33 UTOPIA (4 DISKS)
X45 GIRLS OF SPORT
X49 PAGE 3 GIRLS
X70 GON GON GIRL
X71 TINA SMALL
X91 Calendar girl 95

ANIMATIONS

A005 FILLET THE FISH long story animation
A013 SPACE-PROBE- in search of Alien life form
A054 THE RUN - Lotus being chased by police
A072 LIFES A BITCH - Hmmm for 18 + only
A138 KYLIES (2) Kylie slide & music. Brilliant
A173 HELL RAISER II - CREEPY horror show
A179 THE LIVING WORLD SLIDE SHOW - creepy crawly
A187 PERIL OF THE DEEP (2) Massive sea creature
A190 TERMINATOR II (2) - Brilliant
A193 NEMESIS COMIC - very good comic.
A208 THE LADY AND THE TRAMP - short movies
A213 CANNON FLIGHT- Brilliant graphics
A215 MADONNA SLIDESHOW III - Must for Madonna fans
A225 ANOTHER 5 WAYS TO KILL A MOLE - Classic
A226 NEW VIZ - Hmm for 18 + only
A230 TOO MUCH 3D - Superb Spaceship amin
A231 ALIENS II - Definitely the best Aliens
A236 WHIZZER + CHIP - for Comic fans
A248 PERVERSE SLIDES - funny but rude
A255 BART SIMPSON MEGA DEMO (3 Disks)
A262 STAR-TREK the Next Generation SS
A288 SATURN FLY BY - Remarkable anim VOYAGER II
A290 CHRISTMAS ANIMATION - Ahhn to late now
A293 MANGA (2) very cute Jap chic & robots demo
A295 MAYHEM ON WHEELS 3-real motorbike/car crash
A306 TORNADO Slideshow
A320 GORE - gruesome Horror
A336 FAST CAR - Loads of fast & inexpensive show
A414 MANGA WORLD 3 - More brilliant Manga Pics
A417 AKIRA X-MEN - more MANGA comic Shows

VIDEO TITLERS/TOOLS

U181 VIDEO NOTE database for your video collection.
U431 VIDEO APPLICATION (2 disks) many video titler prog
U250 VIDEO TOOL (3) loads of video utils. Recommended
U864 TELESUBTITLE - new video titler
U965 VIDEO MAXE V4.33 .The latest in video
U352 DESKTOP VIDEO 1 & 2 (best video titler tool) cataloguing system. Dozens of functions
U671 TELE TITLE 2 - Great new VIDEOS titler
U513 VIDEO TITLER (2 disks) more VIDEO TITLER-BEST
U900 TELESCROLL 2 (not WB 1.3) Easy to use Video titler loads of features
U921 WEDDING VIDEO ANIM (2 disks) Requires D.Paint 3/4. Very high quality
U922 CAPTION MACHINE excellent Video titler
U923 VIDEO MANAGER (Not A500 1.3) Video cataloguing system
U925 Video Tittler - very good video titler

U757 150 PRINTER DRIVE

LARGEST COLLECTION OF PRINTER DRIVERS

U.F.O. THE CLOSE ENCOUNTER

INCREDIBLE DISK SET PACK WITH REAL LIFE DOCUMENT REPORT. SIGHTING, U.F.O. KIDNAPPING ETC + MANY UNRELEASED. REPORT OF CLOSE ENCOUNTER WITH THE U.F.O. BEING BRILLIANT. A MUST FOR ALL U.F.O. FANS. RECOMMENDED
compatible with all Amigas
6 DISK SET ONLY £5.95

PRINTER MANAGER

U427 PRINTER-STUDIO excellent print results
U599 PRINTER TOOL - includes typewriter, spooler etc
U792 PRINT LABELS print disk labels/banners
U793 STAR PRINTER STUDIO - for all star printers
U794 SEIKOS STUDIO - For all Seiko printers more specific printer driver for the above printer
U733 PANASONIC STUDIO - 9 & 24 pin printer driver & util
U734 CANON PRINTER STUDIO not A500 (1.3)
U735 PRINTER STAR 24/200 FONT DESIGNER - shareware
U782 CITIZEN PRINTER MANAGER for all Citizen printer owners containing many useful printer util & drivers
U884 CANNON PRINTER STUDIO -f or all models for use with Cannon printers
U757 150+ PRINTER DRIVER largest collection

STAR-TREK MANIA

IF YOU LIKE QUALITY STAR TREK RAY-TRACE ANIM. THEN THIS PACK IS FOR YOU. 5 DISKS OF STUNNING STAR TREK ANIMATIONS. BETTER THAN HOLODECK SERIES. COMPLETE STAR TREK MANIA PACK ONLY £4.95. PLEASE STATE AMIGA WHEN ORDERING



EDUCATIONAL

E001 KIDS PAINT excellent Paint program for kids
E002 COLOUR IT brilliant computer colouring book
E003 TREASURE SEARCH find the hidden treasure.
E004 LEARN & PLAY I (not A1200) many maths & games
E005 LEARN & PLAY II more education programs
E006 SPANISH TRANSLATOR Spanish <> English
E008 MR MEN (WB1.3) brilliant story adventure
E009 ASTROMY tutorial on solar/star etc system
E010 SIMON & SPACE MATHS maths & Simon games
E011 EDUCATION PACK (5 Disks) packed with lots of ed programs ranging from maths to games recommended
E015 DINOSAURS teaches you all about Dinosaurs
E020 WORLD DATABASE requires (2+ meg)
E021 STORY LAND II interactive puzzle games rec.
E022 LANGUAGE TUTOR teaches you 4 languages
E023 TALKING COLOURING BOOK talking Dpaint brill
E024 EASY SPELL II improve your kids spelling
E025 SCRABBLE requires 2-4 players, brilliant
E026 WORDS can help you solve the crossword
E027 OSWALD Very colourful large cartoon game
E030 EVOLUTION breed your own hybrid
E031 IQ TEST + IQ GAMES pack 1 excellent
E033 TYPING TUDOR very good typing tutor
E035 CHESS HELPER help/teach how to play chess
E036 BASIC TUDOR learn about Amiga basic Prog
E038 AMIGA TUTORIAL 7 part tutorial
E039 COMPUTER CARE how to care about AMIGAS
E040 GUIDE TO LOWER BACK PAIN tutorial about the spine & how to avoid back pain. Recommended
E041 KIDS ALPHABET displays all alphabet letters
E042 FRACTION & SILOUEST maths & games, excellent
E043 MATH MASTER teach/test you more on maths
E044 STEAM ENGINE V2 graphics & tutorial
E045 PETROL ENGINE tutorial & animated graphics
E046 GAS TURBINE ENGINE tutorial & anim graphics
E047 STIRLING ENGINE tutorial & anim graphics
E050 DREAM FOR ANGEL explains the meaning of dreams
E051 INVISIBLE WORLD brilliant, recommended
E052 FISH TANK turn your Amiga into a FISHTANK
E054 DEMOLITION MISSION simple game for kids
E055 WORD POWER solve crossword puzzles etc. Good
E056 WORM HOLE simple game, ideal for children.
E057 APPLE CATCHER catch falling apples, brilliant
E058 CROSS MAZE & CRYPTOKING 2 excellent kids games
E059 VERB QUIZ find the word & its relatives. Brill
E061 KING JAMES BIBLE (4D) complete bibles, excellent
E066 TARROT clairvoyace in a instant
E068 GALLOW fancy a game of hangman?
E070 MATH DRILLS teaches all basic maths skills. Vgood
E071 ERROR INFO give info on why your Amiga crashes
E075 WORLD-WAR 2 graphics tutorial on WORLD-WAR releated program eg simulate Starprobe/ molscube/ etc
E076 SCIENCE an excellent collection of science. Ideal for all who are interested or studying science. Recommended. This pack comes on 4 disks
E080 KIDPRIX great childrens paint program
E081 ASTROMY PACK- This is an amazing collection of programs related to astronomy. Can help to locate certain or star positions etc. Must for anyone who studies astronomy or hobby. Great (4 DISKS)
E073 PICTURE & LETTER learn to read - first step
E074 AMIGA BEGINNERS GUIDE tutorial on Amigas
E085 NODDY PLAYTIME demo. Very good
E080 KID PRIX more excellent paint programs
E081 D.T.P FOR KIDS easy to use, excellent
E092 SING A RYHMES sing a song
E094 HIGHWAY CODE TUTOR questions on highway code
E096 READ & LEARN (2D) THREE LITTLE PIGGY Story with speech & graphics. Brilliant, recommended
E097 BACK TO SKOOL vol 1 collection of the best
E098 BACK TO SKOOL vol 2 an education program
E099 BACK TO SKOOL vol 3 & games. RECOMMEDED
E100 LITTLE TRAVELLER information on world wide
E101 WORLD GEOGRAPHY world with map & text
E103 DISCOVERY OF THE ATOM. Tutorial on the Atom (2D)
E104 DESKTOP GUIDE TO MUSIC (3D) guide & tutorial
E107 TRUMPTY FIREWORK ALPHABET Very entertaining way to teach your child the ALPHABET
E109 MR MEN OLYMPIC (2D) many events to complete
E110 CULT TV DATABASE (3D) info on early TV series
E115 ELETRONIC WORLDS (3D) Complete K.James BIBLE
E116 HOW THE EARTH BEGAN - theory how the BIG BANG exploded and created all the stars & galaxies
E118 WORKBENCH 2 tutorial on Workbench 2
E119 DINO WAR Quiz on dinosaurs
E120 JUNIOR MATHS Great learning aid for teaching kids on the maths subjects. RECOMMENDED
E121 PICTURE PUZZLE brilliant JIGSAW type games
E122 WORD FACTORY Brilliant, teach kids words
E123 KID DISK 1 - Brilliant education pack
E124 KID DISK 2 - more education programs
E125 JURASSIC PARK lots of info on dinosaurs
E126 CHILDREN SONG 2 contains 5 excellent songs
E127 MING SHU (A500 only) Brill Chinese Astrology.
E128 ASTRO 22 PRO.V3 - The latest astrology program that accurately calculates the position of the planets, eclipse, zodiac positions etc. Recommended
E129 KID DISK 3 (DTP) Drawing program for kids
E130 FRENCH VERB TESTER should help you with French.
E131 CULT TV DATA BASE II (2 DISK) info on early TV
E142 KID DISK 5 & 6 - 2 disks full of brilliant games
E148 CHESS & TUTOR - FULL teach you how to play chess
E150 INTERNET - FULL guide to internet & superhighway
E161 CLI & SHELL TUTOR (help) ideal for beginners
E162 DELUXE PAINT GRAPHIC TUTOR V 3 & 4 Recommended
E163 JAPANESE - teaches you the Japanese language
E165 KEYBOARD TRAINER An excellent typing tutor
E167 WORD POWER - spellchecker/crossword solver/teach
E163 CROSSWORD CREATOR - design crosswords
E165 CHESS II & TUTOR brilliant Chess II games
E166 PAINT IT (not A500 1.3) latest COLOURING BOOK
E169 HISTORY OF AVIATION Vol 1 Excellent disk
E171 CHILD FAVOURITE - Education program
E175 FRANTIC GUIDE TO COMPUTER (2D) brilliant & funny
E177 CYBER PUNK 2 for Cyberpunk freak only
E181 SIGNITURE CREATOR customise your own signiture
E182 VIRUS WORKSHOP V4 comprehensive guide
E184 IMAGINES VIDEO 2 disks
E185 WORKBENCH 2/3 GUIDE Online help/Complete Guide to AMIGA DOS commands. Very useful.

EDUCATION PACK

OUR BEST SELLER. 5 DISKS OF THE VERY BEST IN EDUCATIONAL PROGRAMS & 21 GAMES PACKS SUITABLE FOR ANY AMIGA (A500-A4000) ONLY £4.99

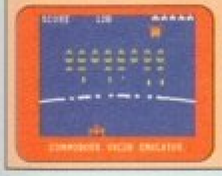
GAMES

G097 PLOTTING like tetris on side
G102 PIPELINES connect pipe V addictive
G109 BUG BLASTER fast action recommend
G112 CUBULUS based on a RUBIK CUBE
G121 LAMATRON (wb 2/3 require Relockit)
G127 DEFENDA Brilliant defender clone
G136 DUEL fast action like BATTLE ZONE
G153 SEALANCE Good Submarine Simulator.
G177 PIXIE KINGDOM (2disk) adventure
G190 ICE RUNNER (not A1200) brill graphics
G195 WHEEL OF FORTUNE VG TV QUIZ games
G216 POOL(not A1200) only one on PD
G222 MEGA 21 GAMES amazing 21 games
G235 DRAGON-CAVE brilliant 3D puzzle games
G237 SCRABBLE (for 2-4 player only)
G240 QUADRIX very addictive, excellent
G242 TAKE EM OUT like to Operation wolf
G245 CHROME-20 brilliant level recommend
G249 WREX (not A1200) super game & graphics
G253 DESTINE MOON BASE Arcade conversion
G258 ALIEN NET WORK (not WB3) invaders
G263 SHAPES Play like a computer jigsaw.
G265 SUBCULTURE brilliant shoot em up
G266 TRUCKING A (2D not A1200) simulator
G268 SCUB-BUSTER destroy enemy Scub Missile
G271 AVINA BLUE fast action shoot em up
G272 TANK BATTLE 2 player tank battle game
G279 ARCADIA the best ARKNOID clone
G300 Q-BOID cross TETRIX and INVADERS.
G303 DIMENSION X 2 player LIGHT CYCLE GAME
G304 GRAND PRIX SIMULATOR (A500 & A1200)
G305 SQUATS REVENGE VG operation wolf
G309 E-TYPE (not A1200) best Asteroid
G310 NEBULAR Excellent 3D shoot em up
G312 GAMES PACK 28 3 high quality games
G313 MEGATRON two player tron/light cycle
G314 LEGO-TRIS (not A1200) Good tetrix
G315 INTER-LOCK Brilliant 3D puzzle games
G316 GALACTIC Excellent 8 levels arcade
G317 HYPER-BALL Speed ball +level editor
G320 GHOST-SHIP Very good 3D adventure
G325 BATTLEMENT hunch back of Notre
G326 MEGA GAME COLLECTIONS III 3 top Games
G329 MADONNA NUDE PUZZLES for 18+ only
G331 GRAVITY massive space exploring game
G333 CYBER-NETIC Brilliant 8 way blaster
G334 DONKEY KONG (not A1200) classic Arcade
G335 CRAZY SUE II- best platform to date
G342 SUPER SKODA CHALLENGE (& track editors)
G344 STAR-TREK similar to RAID2 but harder
G350 TOTAL FIRES III Very fast shoot em up.
G355 DOODY very cute & extremely payable
G356 WONDER LAND amazing graphic recommeded
G359 WAR FARE SIMULATOR (not A1200) Strategy
G360 TOMCAT vertically scroll shoot em up
G362 DELUXE PACMAN + best pacman ever release
G367 CARD GAMES collection
G368 WIZARD-DOMAINS - dungeon type games
G370 KALATRIZ (not A1200) arcade tetris clone
G373 AIR ACE II Very playable shoot em up
G381 INFERNO I Tetris with a twist
G384 OTHELLO best PD version
G385 BILLY THE DRAGON - shoot em up
G386 MOUSE IMPOSSIBLE very addictive
G389 CASINO GAMES - For all gamblers
G390 TETREN most polished Tetris ever released
G392 STRIKEBALL brilliant base ball clone
G399 TRAILBLAZER brilliant (not A1200)
G400 FIGHTING WARRIOR like street fighter
G404 DOMINOES only one of its kind on PD
G406 TOTAL WARS - strategy-like chess in space
G407 NOVA & DOG addictive puzzle game.
G409 WOT IT NAME QUIZ- quiz (ok it good)
G410 FATAL MISSION Excellent Nemisis clone
G411 BATTLE CAR 2-3D car racing
G422 SERENE II excellent arcade games
G431 NESTER CARD GAME- hours of fun for a quid
G435 ROULETE American roulette, excellent
G438 TRAILBLAZER 2 C64 conversion
G441 ETYPE 2- Simply the best asteroid
G443 OLYMPIAD DISK (2D) Olympic sport events
G445 DESCENDER GAME tank, search & descender
G446 OBLIDOX excellent Arcade/Puzzle game
G448 PARACHUTE JOUST quite playable
G455 CASTLE OF DOOM VG graphic adventure.
G456 DUGEON OF NADRIF R.G.P adventure
G460 WIBBLE WORLD GIDDY Large platform game
G462 COSMIC RACE motorbike with gun
G465 CHESS II Very good chess game
G467 CASH FRUIT- good fruit machines
G478 AMOS CRICKET cricket games
G488 EXTREME VIOLENCE 2 player battle out
G489 ENGIMA MACHINE very challenging puzzle
G490 MEGA BALL 2 very playable break out clones
G491 BOUNCE & BLAST brilliant platform 10/10
G492 ZOMBIES & DEFENDER 2 fantastic games
G494 MERCENERY SIMULATION 3D wars games
G499 LIFE -simulation very interesting
G500 TRANSPLANT the best Asteroid yet
G501 KLAWZ THE KAT-great platform games
G502 DRAGON-FIRE more medieval arcade
G503 DRAGON-FIRE - Gulf war mission
G511 HIGHWAY HELL like SPY HUNTER
G513 BLASTER- kill invading aliens
G531 OPERATION FIRESTORMS - brilliant
G534 CASTLE KUMQUAT similar to Alien breed
G535 BLACK DAWN brilliant graphic adventure
G537 ACK ACK - shoot em up for kids
G538 MORIA 5.4 The latest Dungeon & Dragon
G539 BRIDGE Good version of Bridges
G540 ORK ATTACK bloody adventure
G541 REBOUNCE 2 player futuristic breakout
G542 ROAD TO HELL brilliant car racing
G544 SUPERTOM CAT New vertical shoot em up.
G545 KUNGFU CHARLIES mix with platform, brill.
G546 RAID 4 latest vertical scroll shoot em up
G548 QUIZMASTER very good quiz program
G552 ELEVATION games based on lift?
G560 IMPERIAL WALKER - Based on STAR WAR games
G567 STARBASE 13 (2D) Brill like MONKEY ISLAND
G657 AMOS LOADSA MONEY best FRUIT-MACHINES
G659 MR MEN OLYMPIC (2D) many events to complete
G660 4 L.C.D DREAM 4 small hand held games
G664 NEIGHBOUR GAMES (2D) Brilliant graphic
G665 TIME RUNNER (WB2/3) Brilliant graphic
G667 GOLF (2 disks) One of the first PD GOLF
G668 AMOS CRICKET 2 New Amos cricket simulator
G669 MUGSY REVENGE gangster graphics adventure
G672 JIGSAW (2 disks) very playable jigsaw games
G673 BOBBY GARDEN + DIGGER (NEW) Brilliant
G674 HIGH OCTANE (NEW FASTER VERSION) (not WB1.3)
G675 TIME RUNNER amazing graphics adventure
G680 SPACE-INVASION 2 - Fantastic Galaxain
G681 AUTOMOBILES - PD version of SKID MARK brill
G682 BANDIT MANIA - Brilliant fruit machine demo
G685 PROJECT BUZZ BAR - Brilliant asteroid
G687 PARADROID 64 (not A500 1.3) Excellent
G689 GUN FIGHT (not A500 1.3)
G690 THE REAL POPEYE 64 (A500 1.3 only)
G692 SYSTEM DEFEND - Brilliant Defender clone
G698 AMIGA-BOY-Game boy emulator + tetris
G732 DETHELL IN SPACE. Recommed.
G735 OVERLANDER Brilliant arcade MOON ALERT
G737 SERIOUS BACKGAMMON The best in PD BG
G771 STAR WOID (2 Disk) brilliant Thrust
G772 UN-SENSIBLE SOCCER very similar to Sensible soccer games. RECOMMENDED
G773 FRUIT MANIA - Brilliant Fruitmachine.
G774 TRICKLE TREAT - like DOOM on the PC
G775 FOOT-BALL MANAGER - new version
G782 SOLO ASSAULT 3D like Wing Commander
G783 SEED OF DARKNESS - Brilliant graphic adventure
G784 NANO FLY Superb explore game RECOMMENDED
G785 THE GREAT GOLD RAID - very addictive
G787 ANT WAR V1.9 (LATEST) not 1.3
G788 ZENO-MORPH - Great graphics
G789 TASK FORCE very good MIND SHADOW clone
G790 GREEN FIVE Amazing graphic like FLASHBACK
G791 PROFESSIONAL BINGO CALLER
G792 MARTIAL SPRIT brilliant STREET FIGHTER II
G797 INTENSE like AKAI-WARRIOR in the arcade
G798 6 EXCELLENT CARD GAMES collection
G799 MOOSE DRIVE (A500 1.3 needs 1mg chip ram)
G809 BLITZ 2 fast action shooting games
G810 EXIT 13 Brilliant puzzle
G811 TEMPORAL MISPLACEMENT- graphic adventure
G812 A DAY AT THE RACES - V.Good horse racing games
G820 BOULDER ORIGINAL with 80 levels
G821 BOULDERDASH CAVE/LEVEL CONSTRUCTION KIT
G822 BOULDER COLLECTION 2/3 160 level (2 disks)
G837 BOULDERDASH 80 cave/level
G839 BOULDER PACK 640 BRAND NEW LEVELS on 8 disks, must for all Boulderdash fans
G860 ALIEN NETWORK - new Space invader
G862 BATTLE FORCE excellent text adventure.
U863 GNU CHESS the best chess with 10 level
G866 SWORD OF YIG Graphic adventure
G867 POWER-TETRIS 1 or 2 player Tetris RECOMMENDED
G868 SUPER SMASHING TETRIS very playable Tetris
G870 CHESS II & CHECKER One of the best around must for all CHESS or CHECKER players
G871 GRAVITY FORCE 2 1 or 2 player thrust clone
G872 SCHNEBITZ Commercial quality puzzle games
G875 DELEXE GALA v2.3(new) add new feature & bonus game + 2 player RECOMMENDED. Get it now
G876 THE KRILLIAN INCINDENT like ELITE 2/Epic
G878 QUANTUM - Maze collect & escape type games
G879 RAGS TO RICHES - like MONOPLY
G884 WIPE OUT- mindless blasting game
G885 GODZILLA Another shoot-'em up
G886 SUPER MEGA FRUIT- All new Fruit Machine
G887 STEWARDS ENQUIRY New Horse racing games
G888 DRIVING MANIAC 3D (fill vector like Indi 500) car racing - very fast. RECOMMENDED
G889 PLANET FALL - Luner Lander clone
G890 INTENSE 2 Follow up to part 1 RECOMMENDED.
G891 BUCK TOOTH ADVENTURE Very good multi level shoot/collect em up RECOMMENDED
G892 PENGO 2 - Maze type games. Recommended
G893 SUPER OBLITERATION Blast asteroid very similar to PANG 2 lots of weapons. RECOMMENDED
G894 SUPER INVASION II - New SPACE INVADER
G896 ULTIMATED QUIZ - pub style quiz machine
G897 THE SHEPHERD Brilliant POPULUS clone. REC.

WE ALSO STOCK THE ENTIRE COLLECTION OF LSD LEGAL TOOLS 1-150 SCOPE 1-220 FRED-FISH 1-1000 LSD DOCS 1-46 ASSASSIN GAMES 1-200 ETC

COMMODORE VIC 20 (plus) emulator + 30 top Vic 20 Game

It's here finally the COMMODORE baby VIC20, this pack comes with over 30 top Vic20 games like COSMIC CRUNCHER, RAT-RACE, SARGON II, CHESS etc.



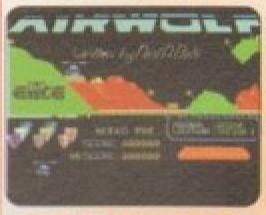
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- Printed loading instructions
- Print game list (essential)

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C64 & 45 original games...£4.99
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P C

We now have the following pack for PC
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Improve loading & saving program help stop damage to disk etc.

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AGA A1200/A4000

NOTE This AGA listing is for the A1200/A4000 only.

AGA001 EXTENSION DEMO Stunning demo with fast landscape anim and a rotating city, still regarded as the best AGA demo
AGA002 FRACTAL GENERATOR stunning fractal in 256 colours
AGA003 WORKBENCH HACK many hack/toy/blanker ect
AGA006 NEW SUPER KILLER know & kill over 316 types of virus, must for all A1200 owner
AGA007 MINDWARP one of the very first demos for the A1200
AGA008 KLONDIKE DELUXE AGA (3D) Simply the best A1200card games with glamourous ladies as card faces 18 + only
AGA011 SLEEPLESS NIGHTS 3
AGA012 PLANET GROOVE Truly A1200 Demos
AGA013 MOTOR INVADER 2 (2D) Very playable INVADER clone set inside your computer. Loads of fun
AGA015 POINT OF SCALE Great A1200 only demos
AGA016 CHROMAS- Fairly good demo.
AGA017 WORLD OF MANGA AGA (4DISK) magnificent Japanese comic slide show includes Japanes Chick etc recommended. Still the best seller on the A1200-- brilliant
AGA021 MAGIC WORKBENCH Improve the look of your WB& add some function to your WB really BRILLIANT
AGA022 WB 3 UTILITIES loads of WB 3 only utilities like degrader etc. Not for beginner
AGA023 U-CHESS the best chess program games so far but requires 4 megbytes. Brilliant graphics
AGA024 WORKBENCH 3 SCREEN Great backdrop for A1200 (not beginner) GIF BEAUTIES is one of the highest qualitygirl Pictures available (1-18)
AGA41 GIF BEAUTIES (1-18) pictures of raunchy women who don't seem tobe wearing many clothes
AGA62 BODYSHOP 1 More of above
AGA64 BODYSHOP 2 (2D) More of above
AGA66 BODYSHOP 3 More of above
AGA68 BODYSHOP 4 (2D) More of above
AGA70 BODYSHOP 5 (2D) More of above
AGA72 BODYSHOP 6 (2D) More of above
AGA74 BODYSHOP 7 (2D) More of above
AGA80 FITCHICK 1 See BODY SHOP for description
AGA82 FITCHICK 2 (2D) See AGA41 for description
AGA84 FITCHICK 3 (2D) See AGA41 for description
AGA90 ASSASIN A1200 FIX DISK 1-Brilliant collection of degrader that should get most of the old A500 games/software to run on the A1200. A must for anyA500 owner just upgrade to an A1200 - RECOMMENDED
AGA91 ASSASSIN A1200 FIX DISK 2 (new) like above but with new collection (different) degrader - recommended you buy both disks - super
AGA94 RELOKIT V1.4 latest. Run A500 SOFTWARE
AGA97 A1200 UTIL - AGA TESTER, SYSINFO etc
AGA98 ACTION REPLAY V4 Complete ACTION REPLAY on disk
AGA99 MADFIGHTER 2 brilliant street fighter clone
AGA100 AGA BLITZ SCREEN BLANKER
AGA101 FAST GIFF 2 display GIFF pics in Workbench.
AGA102 AGA DIAGNOSTIC - NEW system tester
AGA103 BLACK BOARD AGA decent image processor
AGA104 REND 24 Similar to above
AGA105 QUICK GRAB AGA - can grab AGA screens
AGA110 WORLD BEYONDS 1 (2) stunning 256 COLOUR fantasy art. Leaves Atari users breathless
AGA114 SMELL LIKE CHANNEL NOS Brilliant demo raytrace pictures ever released on the A1200
AGA121 MAGIC FACTORY 1 STAR TREK (5 disks)
AGA133 AGA UTIL v1 AGA util compilation
AGA134 AGA UTIL v2 more AGA util compilation
AGA135 AGA UTIL V3 more of above
AGA136 AGA UTIL V4 even more of above
AGA137 IMAGE PROCESSOR IFF picture processor.
AGA138 MULTIBOOT- 4 various versions A500 EMU
AGA139 WB3 HARD DISK PREP & INSTALLER installing WB 3 (prefers on the hard disk
AGA140 CROSS DOS PLUS v5.1 read/write PC files
AGA141 FARRARI ART 2 (2D)- load of Ferrari & ray trace
AGA142 SUPER LEAGUE 3 - latest manager games
AGA144 SPEAK & SPELL - educational software for kids
AGA145 BIG TOPS (18 + only) Hmmm
AGA146 KELOG LAND - brilliant platform games - get - a must
AGA150 ACTION REPLAY V5 - NEW UPDATE TO V4
AGA160 GIGER TRIZ very playable 256 colour tetris
AGA162 FATAL-BLOW new STREET-FIGHTER 2 clone
AGA164 CINDY CRAWFORD Vol 1 (2 disk) latest release
AGA166 INFESTATION (3 disk) The ultimated AGA demo
AGA170 CINDY CRAWFORD Vol II (2 disks) amazing
AGA172 VIDEO TRACKER AGA - ultimate demo maker
AGA174 MAGIC WB EXTRA vol 1 & 2 (2 disks)
AGA180 GIF BEAUTIES Vol (11-18) 8 more girl disks
AGA189 FRIDAY AT 8 other brilliant AGA demos
AGA190 ASSASIN MULTIVISION AGA pic viewing util
AGA192 ALIEN FRENZE 2 player blasting + power up
AGA194 BIG TIME SENSUAL (2 disk) SPACE BALL 2
AGA200 MASQUERADE 2 disk brilliant puzzle games.
AGA202 RAM JAM 94 it can be done (2 disk)
AGA203 EXPLIXIT 2 DEMO new effect well done.
AGA204 COMPLEX ORIGIN 2 disk requires 2 disk drives
AGA206 TREASURE OF TUTANKHAMUN-education tool
AGA210 CHANEL Z DISK MAG (2D) A1200 disk magazines
AGA220 KLONDIKE NEW CARD SET (7disks)
AGA230 LOVE 2 disk - simply brilliant
AGA231 AGA UTIL 7 & 8 (2 disks) more util
AGA234 KNOTTY Stunning AGA sliding picture puzzles
AGA240 LOTTERY WINNER hopefully will improve your chances of winning a jackpot. GOOD LUCK
AGA241-258 AGA GAME-GALORE AGA 01-18 We stock the entire collection of the AGA GAME GALORE each disk pack with quality AGA compatible games. RECOMMENDED
AGA251 PACKMAN AGA - the best pacman yet
AGA252 ROCKET PD - Super thrust clone brilliant graphics for 1 or 2 player
AGA253 REAL DEMO stunning special effects
AGA254 DIRT AGA Brilliant 256 colour effects
AGA255 DELIGHT EXPLORE excellent demos
AGA256 KEFEREN AGA Demo lots of effect
AGA257 MINOMIST RAVE great rave music.
AGA258 OXYGENE Fantastic demos
AGA259 INTELOUT another very good demo
AGA260 SOME JUSTIC 94 Demo of the month, brilliant whirl effect. RECOMMEND
AGA262 TO THE DEATH very good STREET FIGHTER clone with very good graphic.
AGA263 GEORGE GALAXO (2 disks) brilliant multi-level shoot/platform game. RECOMMENDED
AGA265 MISSILE OVER ZENON (2 disks) Brilliant 3D missile commander with fantastic graphics
AGA266 TEAM HOI DINO PLATFORM excellent dino platform. Note: this disk was a commercial game
AGA268 TEAM HOI SAGA. The Final chapter (3 disks). The ultimate in demo, comes on 3 disks
AGA269 RAYWORLD (3 disks) very impressive
AGA270 CREAM DEMO - lot of 256 Vector effects
AGA273 EMPTY HEAD lots of vector/ ray trace
AGA274 MUSIC 2 SURVIVE 2 disks 8 excellent music master pieces. Well worth getting
AGA271 RAVE MAXIMUM OVERDRIVE II (2 disks)
AGA278 CHANNEL Z ISSUE 1 (AGA) (2 disks) AGA base disk magazines. RECOMMENDED
AGA279 AGA Utilities including Cache X, Superduper V3, New Menu 2 etc. RECOMMENDED
AGA280 CHANNEL Z issue 3 (2 disks) AGA disk magazine - get the most out of Dpaint
AGA282 CHANNEL Z issue 5 (2 disks) AGA disk magazine topic. Demo/music
AGA285 WORKBENCH BACKDROP VOL (5) Stunning AGA backdrop for WB
AGA286 SPECTRUM EMULATOR V1.3 AGA Latest Spectrum emulator for AGA only

SOFTWARE 2000 FREE DISK TOKEN

Buy 10 + disk & choose any 1 extra disk FREE. Offer with token only

NEW–TITLES

AGA306 ASSASIN FIX DISK 3-degrade util for run old software on the A1200/A4000s
U978 DELUXE PAINT 4 BUDDY SYSTEM-
Get the most out deluxe Paint Instane Help & it even explain every every function/command in Dpaint in great detailed. RECOMMEND
U981 VIRUS CHECKER V6,51. The Very latest V-Killer
U982 DIRECTORY OPUS V4 add Extra Command
U983 MAGIC WB & MAGIC MENU ..Both Latest version
U969 POWER-CACHES Speed up disk loading,Accesses
U970 HARDDRIVE SECURITY II Large collection of HDscerity programe eg Lockout2,Password & many more
U971 HARD-DISK & FLOPPY DISK DOUBLER (Epu) Not WB1.3
U972 PAGESTREAM V3 F fix.Very Latest version
U973 CHEAT FOR 800 + GAMES, LEVEL CODE Cheat V3.3.(2)
U974 HD GAMES INSTALLER 2 install tops games to HD eg:ZOOL2, Rise Of the robot,Mortal Combat2 & many more
U975 DMS V2.04 Pro. Crunch entire disk. (not1.3)
U976 MAGIC SLECTOR V1.4-Change Magic WB back drop
U977 MAGICWB ICON ARCHIVE (3) 1000's of MGwb icons
U979 ICON ACHRIVE(3) 1000's of normal Icon(any Amiga)
U980 VIDEO TRACKER 2 DEMO MAKER (AGA Ver also avail)
U961 VIDEO TRACKER-(5) Video module & effect for above
G898 ALIEN GENOCIDE (2) Shoot aliens set in space.
G899 PUCKMAN. One of the better PacMan arround.
G900 SUPER-BATTLE ZONE.Vector Tank games(not WB1.3)
G901 M*A*S*H a sequence to ANTWAR play very similarto LEMMING & WORM but with load of Weapon (Brilant)
G903 BOULDERDASH CAVE CONSTRUTION KIT (2) editor
G904 LAST SOLDIER (2) multilevel platform gamesG905 CBBERTECH (2) exclient ALIEN BREED Clone
G906 HANGMAN New version of this popular HG gamesG907 ACE SPACE nice Platform games
G908 COLOURMANIA slide/Klatriz type puzzle games
A430 JUPITER IMPACT. real Picture of the collisionof jupitor and the asteroid. Brilant *RECOMMEND
AGA295 DE-LUXE MONOPOLY- Board game.V addicte
AGA296 DONKEY KONG Arcade classic conversionAGA297 BOMB PAC Extreamly good to play
AGA298 ROCKET 2 set deep underground brillantgraphic. even better with 2 player
E25/AGA299 SCRABBLE-Now fully run on all Amiga
AGA300 MAGIC WB V2. Demo of version 2
AGA302 TUTANKHAM II(2) Education-Egyptian MUMMY
AGA303 PAMLA.ANDERSON.(2) 18+ only BayWatch Babe
AGA304 BODYSHOP V8 (3) more bikini beauties
AGA305 TIMEZONE (2) V.Good graphic adventures.
AGA307 DENTAWOLF dooms demo
AGA308 NAXIS -Really show what AGA graphic co do
AGA310 FEARS (2d)- dooms clone demo
AGA312 JINX (2d) arcade puzzle type games.Brilant
AGA313 RAM JAM THE TASTE DEMO.very wicket demo.
AGA315 ILEX MYSTIC. New AGA demos
D400 VIRTUAL WORLD DEMO.
50 ALL NEW SPECTRUM GAMES (4).for SPECTRUM Emu
M360 DYNAMO (2D). Excellent music disk
M362 RAVE NATION -Another brilant music disk.
D360 SONIC THE HEDGEHOG. Brilant demo
G901 M*A*S*H a sequence to ANT WAR play similar toLEMMING & WORMs but with load of Weapon (Brilant)
E210 LEARN & PLAY 3 Latest Education & Games
E240 BARNEY THE BEAR GOES CAMPING (2d)Brilant teach your child about animal
E241 COMMS GUIDE V1.1
Every thing you need know how to connectto the INTERNET & BBS. must for any Amiga owner.
U986 VIRUS-WORKSHOP V4.7-the best Virus killer
U987 GRAPHIC-CONVERTER (2D) most format cover
U988 TURBOCAT Auto catalogue your disk library
U989 AUTOBOOT DISK MAKER V4 -for making your own compilation disk. amust for all amiga owner automatic boot disk. Must for every Amiga owner
U990 800+NEW GAMES CHEAT (2d)for any gameplayer
U991 PD-CATALOGUE CREATOR-for your own libaray
U992 SCIONS-Store & trace your family trees
U993 IMAGINE STUDIO V2.(2D) The best PD image (picture) processor available rival even the commercial costing hundres of pound. (not k1.3)
AGA320 MAGIC-WB ICON CREATOR. up to 256 colour
E241 MATH ATTACK- Maths relate games for kids
E242 ANIMAL-LAND-Ideal for young kid. Execel
E243 PICTURE-MATHS-Maths program for kids
E244 APOLLO 2 (2d)-detail Mission of Apollo2
G910 HARRY-HADDOCK- Brilant platformer games
G911 ART OF BREAKING HEAD (6d) Massive Mortal Combat clone(Not for kid). Not WB 1.3
G912 MANGLE FENDER -Brilant, Smash up othercar/tank ect to win. extremly addicted. get it
G913 ARCADE CLASSIC Vol 1 & 2 (2 d) collectionof all the all time classic arcade games. bril
GRAPE VINE 20 (2d)- the best disk magazine
G914 HELICOPTER-play like Desert strike
G915 COW WARS. Very addicted 2 player games
G916 ISLAND -Play like Monoply.
G917 MATCH (2d)-Very addicted memory game.
G918 FISHY FISHY. very good games.
AGA320 KLONDIKE 3 (3disk) Hd require & 2meg+we aslo have a list of 25 cards for above.
U981 IMAGINE STUDIO V2 IMAGE PROCESSOR.rival to commercial I.P costing 100's ££ (not 1.3)
U982 TEXTURE STUDIO. Render Various Texturefor use with Imagine 3 ect req FPU.(not 1.3)
U283 PRO-GAMBLES V2 must for all gamblers.
AGA321 HOT-BABE 1 (2)
AGA322 HOT-BABE 2 (2) Stunning model
AGA323 HOT-BABE 3 (2)
AGA324 HOT-BABE 4 (2)
AGA325 HOT-BABE 5 (2)
G919 COP THE LOT Pro Latest Lottery preditor
G920 LOTTERY PROFFESIONAL This version use the prediction from USA & Canada.

BUSINESS SOFTWARE

U007 TEXT PLUS 2.2e easy to used word processor
U023 BANKING Home account program
U086 LABEL DESIGNER design your own labels
U087 CALY 1.2 Excellent Database prog. RECOMMENDED
U144 DESKTOP PUBLISHING The best PD DTP available
U128 BUSINESS CARD MAKER (not A1200) brilliant
U160 600 BUSINESS LETTER very handy. Get it now
U611 BUSSINESS CARD MAKER - can Print in color
U101 DATA BASE WORKSHOP (2) brilliant PACK
U121 SPREAD SHEET Very easy to used spreadsheet
U183 QUICK BASE Very powerful Database. Easy to use
U112 RIM DATABASE powerful database + full DOC
U195 AMIBASE - Professional II The best database yet
U227 TEXTRA Can edit serval document at once
U229 FLEXI BASE Small easy to operate database.
U236 PENNY WISE Very powerful database.
U297 VISICALC Great database lots of fuctions
U356 TEXT-ENGINE V3.4 - full feature wordprocessor
U343 LITTLE OFFICE - databases/wordprocessor/spreadsheet
U345 HOME BUSINESS JOURNAL - Easy to use database
U357 BON APPETIT DATABASE many receipt.
U364 HOME ACCOUNT-Account program
U368 AMICASH regarded as the best account prog. Excellent
U369 JOURNAL full feature account program
U385 LORAN NOTE BOOK database & world map.
U390 DATA BASE compilation - best seller to date
U398 MORTAGE CALC calculate mortage repayment rate etc
U426 MONEY PROGRAM very good account program
U437 ACCOUNT MASTER V2.8 new account program
U520 HOUSE INVENTORY - ideal for home insurance
U559 ADDRESS PRINT V2.1 Store & print addresses
U567 TEXT-PLUS V 4.0 pro requires HD & 2meg
U681 TEXT ENGINES V4.1 latest 34,0000 word spellchecker
U688 INVENTORY 2 details of home contents, for insurance
U712 EDWORD PROFESSIONAL truly the best wordprocessor
U732 EASYCAL - massive spreadsheet max 92583 cells
U756 PAY ADVICE ANALAZER - money prog.
U802 ADDRESS PRINTING print addresses on labels
U889 PAY ADVICE V3 account program
U810 LABLE MAKER-Print labels etc. New
U900 THE MONEY PROGRAM - Accounts
U901 LOANS ACCOUNT
U954 ONFORM One of the best Invoice makers
U959 ACCOUNT MASTER v2.2 (latest) programs up to 1000 entries per account

100 TOP DEMOS

The Largest collection of demos ever released – this pack contains over 100 top demos. Must for all Demos. Out top seller...RECOMMENDED

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ALL PACKS SUITABLE FOR ANY AMIGA SYSTEM

Board Games Pack 1 (5 disks)
Brilliant collection of the best board games, eg: Scrabble (new), Monopoly, Chess, Dice, Dominoes, Cluedo etc. Far to many to list

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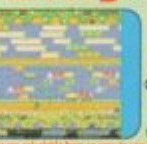
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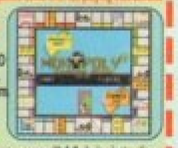
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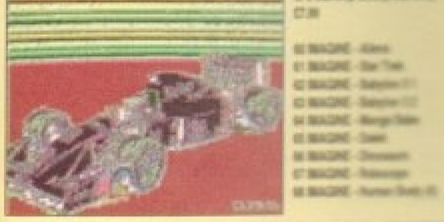
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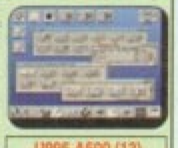
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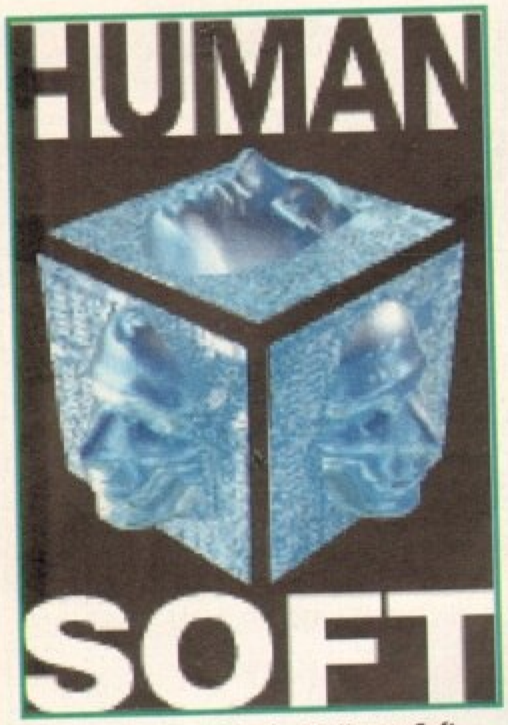
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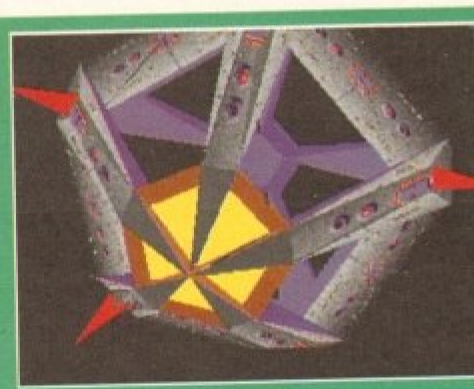
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Originally designed for the PC, Human Soft have taken responsibility for the Amiga version



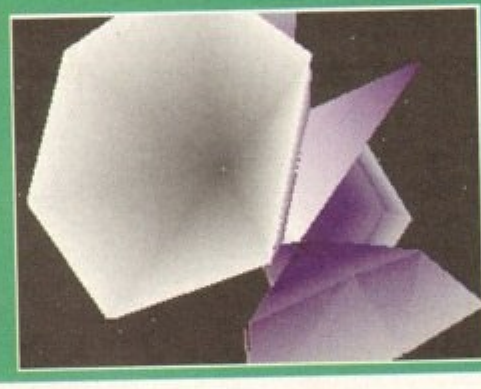
Gametek hope to bring us the most graphically advanced game in the genre, though how successful they've been remains to be seen



Capital ships and bases will prove to be particularly tough targets, though knowledge of their blind spots will help players gun for the kill



A Tancred fighter – just one of the types of ship players will have the opportunity to fly



Star Crusader will feature numerous weird and wonderful 3D creations

system analysis



Star

After months dominated by race-'em-ups, a new game with a proper storyline is about to be converted for the Amiga. Gareth Lofthouse previews Gametek's vision of outer space crusades.

Elite started it all off. Back in the early '80s, the forefather of all space combat simulators was inspiring awe from anyone who owned the good old BBC micro, and to this day it's hard to think of a bigger landmark in the history of entertainment software.

Unsurprisingly for such a successful game, it spawned so many inferior imitations that the formula was in danger of becoming stale. In order to give their new outer space flight sim a new edge, therefore, Gametek have aimed to create a unique experience that will combine elements of strategy and storytelling along with the state-of-the-art 3D technology we've come to expect from the genre.

As the name suggests, Star Crusader is inspired by the medieval crusades. In the makers' view, the story of the exhausted, battle-weary Europeans marching towards Jerusalem to drive infidels from the Christian Holy Land is one of history's greatest tales. The developers have also taken on board the stories behind the rise and fall of great empires, and the moral questions that imperial expansionism left behind.

In contrast to the simplistic cartoon depth of most computer games, Star Crusader is making large claims on a more mature form of entertainment with a game that sets out to create an experience full of conflict and, would you believe, *moral* choices.

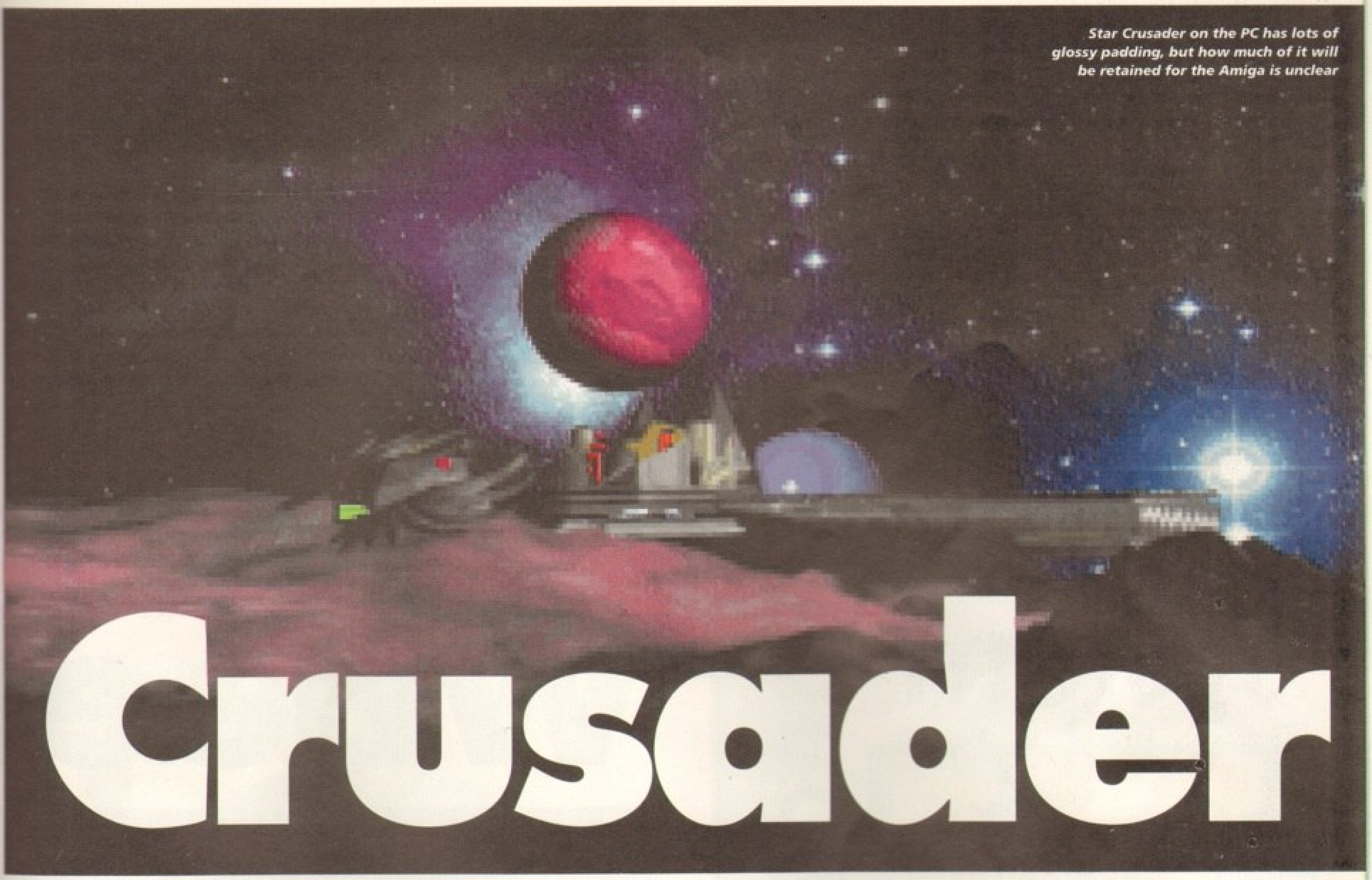
The moral dimension behind Star Crusade could prove to be a unique feature since the game forces players to make important judgements about the conflict they're involved in. In the middle of the adventure, for example, players must decide whether to continue to serve the expansionist Gorene Empire, or whether their sympathies lie instead with the alliance of alien races struggling to maintain its independence.

The background to Star Crusade is as follows. The Gorene Empire dominates the known universe and seeks constantly to expand its influence whenever it encounters a new alien race. To some, the Gorenes are seen as conquerors, but they see themselves as liberators and educators of the universe.

The Gorenes have encountered an alliance of aliens in the Ascalon Rift that are fiercely protective of their independence. The player begins the game as a pilot in the elite Gorene Gold Squadron and is charged with the task of forcing the alien alliance's surrender within three months. But the game becomes a good deal more complicated as events progress, and the player must eventually decide whether to



Each of the spaceships will have a different interior – here we view the cosmos from within a Gorean Liberator



Star Crusader on the PC has lots of glossy padding, but how much of it will be retained for the Amiga is unclear

Crusader

stay loyal to the crusade's cause. What remains to be seen is whether these relatively highbrow concepts are actually an integral part of the gameplay, or whether they're a rather pompous form of wrapping paper. Certainly, the heart of Star Crusader will be more familiar to the average gameplayer, with the good old thrill and action of a 3D space combat sim providing the main attraction.

The flight system has been designed with fun and ease of use foremost in mind, which will hopefully make it of wider appeal than some of the ultra-realistic flight simulations available. With a choice of 13 ships each bearing a unique host of weaponry, there should, at least, be plenty of features to keep players returning for more battles beyond the stars.

Those who find games based on real-life technical flight specs abhorrent will be comforted by the fact that Gorene technology surpasses the limitations of normal, work-a-day physics – in other words the emphasis is on fun and excitement rather than detailed authenticity.



On the other hand, it seems likely that the game will still require patience from those who normally shy away from the complexities of the flight sim. Despite the fact that the developers have bent the laws of physics, Crusader has a typically vast number of keyboard commands, camera views and pre-mission sequences to get the hang of. How easy these are to pick up will determine how appealing the game ultimately is to action fans unaccustomed to the unique challenges of the genre.

Though it features the now traditional campaign and mission objectives, Crusader does have extra appeal in that it breaks away from a linear plot. There are, in fact, 104 missions that lie along different gaming paths.

Accordingly, players will have to adjust their style of play and remember that they don't have to succeed in every mission to win a campaign. In order to advance the overall gameplot, some missions have been designed to be very difficult, and the only way to see all of Star Crusader's missions is to lose a battle here and there. In other words, whereas most games in the genre demand that players save a game and replay unsuccessful missions, Star Crusader will reward a more honest approach to player failures with interesting developments in the storyline.

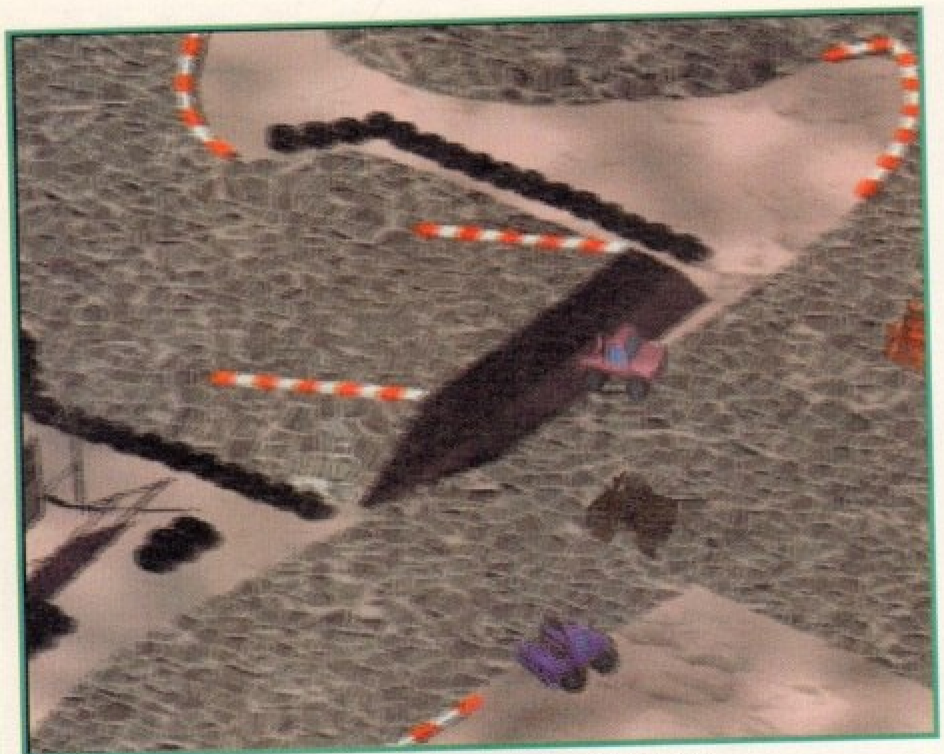
As the game progresses, more space craft will become available to the player to take out on their missions. It will be impressive if each of them handles differently, but at least the developers have already introduced variety by designing different looking cockpits for every type of craft.

In an attempt to make the intergalactic dogfighting as varied and challenging as possible, the developers have given each of the five alien races individual strengths and weaknesses that must be understood if the player is going to win. The Tancreds, for example, use powerful, durable ships that lack manoeuvrability, so getting in close and sticking there will be the player's best hope of victory.

If the player ends up taking on Gorene ships, however, the key to success will be team work. Before each mission, players choose wingman to support them in an action, and in a conflict against a Gorene fighter they should be ordered to attack in groups of two or three.

The game makers' concentration on breaking away from the tediously repetitive nature of some space sim's mission structures will hopefully help to distinguish it above the norm. On the other hand, a downside to the space sim is that its setting doesn't have the variety of a terrestrial sim with its day and night flying conditions and its climatic changes. In what is presumably an attempt to tackle this downfall, however, Star Crusade will feature conflicts within nebulas and mine fields.

A nebula will affect tactics because it interferes with all energy weapons, which means the players will have to adapt to shorter targeting ranges to make a kill. Fighting in the midst of a mine field presents a different challenge, however, since the mines will detect large energy expenditure and hone in on a pilot like a swarm of bees. Clearly then, Gametek have taken a tried and tested formula and attempted to inject it with a new lease of life. The unusual nature of the storyline, with its non-linear development, stands out as the most appealing and fresh attraction of the game at this early stage; ultimately, however, much will depend on how well the basic combat engine works on the Amiga.



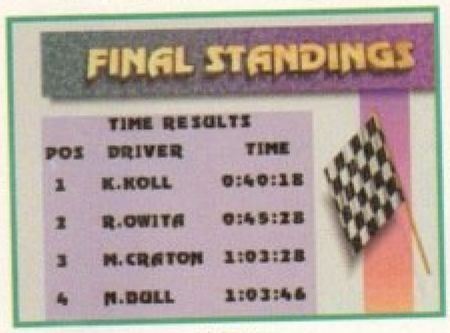
Fast action is the order of the day as your car speeds over the jumps



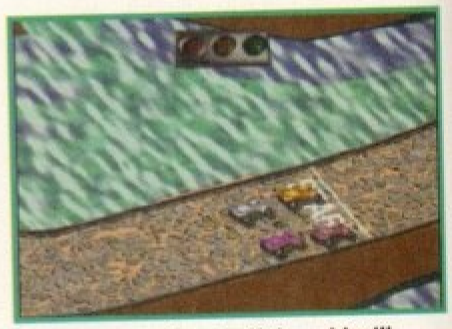
Trying to overtake an opponent is one of the hardest moves to make in Wheelspin



Buy and sell your complete car setup to aid you in your next race



Find out your total in the final league placings



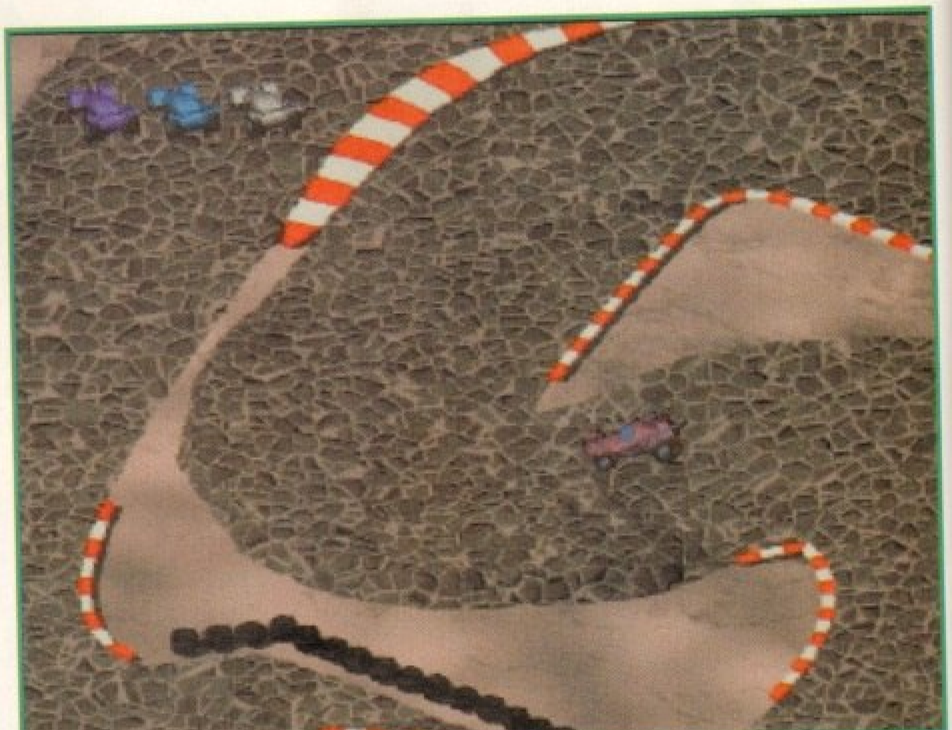
Getting a good start off the grid will enable you to take the lead early on

system analysis



Wheel

Andy Maddock spins the wheel of justice to see how fast it turns. This time it's the turn of Black Legend's Wheelspin. Is it guilty or not guilty of being another superb racing game?



Tight corners must be mastered. You can't bomb round the track with continuous throttle!

During the last few months, driving games have completely cluttered up the entire office. Skidmarks 2, F1 World Championship Edition and ATR are the ones that sit proudly on top of the pile. The top-down view of the action re-emerges once again – this time Black Legend are the culprits who intend on pushing it to the limits once more.

Racing games are probably the worst type of game to think of an original title for. For instance, all car parts have been taken and most motoring terms have been pinched. Nearly all of them have been exhaust-ed already. Ho ho! What's left... Axle Action? Exhaust... Fumes? Nope, I was wrong, there's still one left – Wheelspin?

Set in the not too distant future, Wheelspin intends to blast away the past and the competition, leaving its skidmarks in their places.

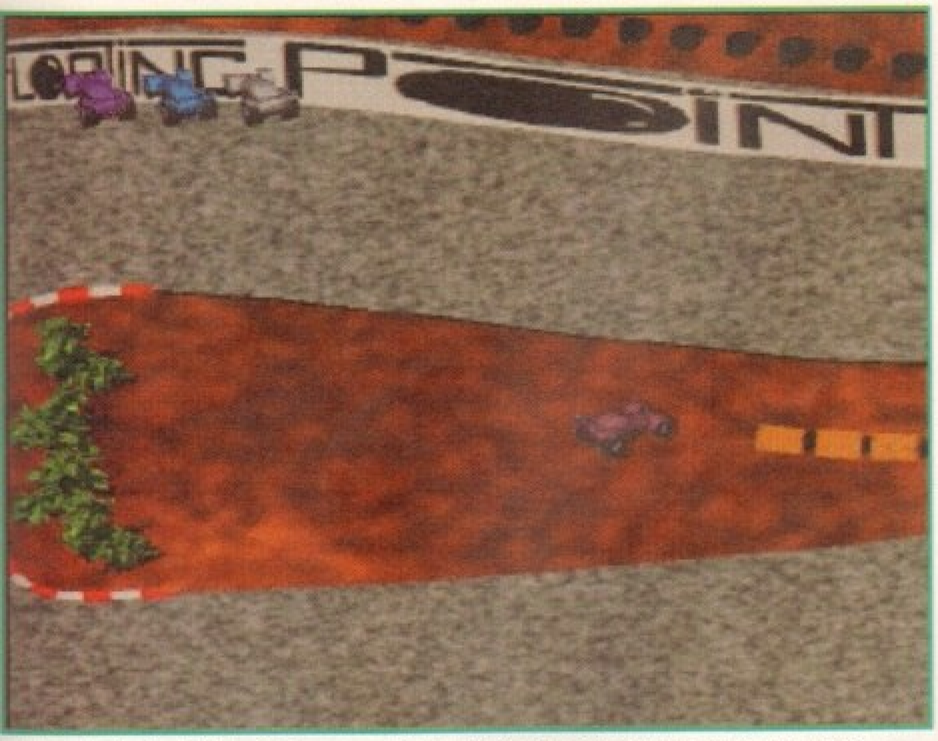
I think it's quite safe to say that Skidmarks is the best game of its genre at the moment, meaning Wheelspin has its work cut out trying to beat the best. Skidmarks gave a distinct cartoony feel, most likely because the graphics were hand drawn or done by another suitable method. The whole game felt more like a nice pleasant race around a track rather than the distinct sounds of metal clashing and crunching as competitors fly past. Wheelspin is most certainly the latter.

At present, Wheelspin is beginning to look very impressive, boasting superb ray-traced graphics – cars, tracks and everything. I thought Skidmarks sadly missed out all these graphical features that could have made it so great. However, it's all irrelevant now as it's a strong possibility that the infamous Skidmark crown could be taken.

At the moment, Wheelspin is rather a long way off completion. There are some league competitions included, but nothing too challenging as yet. They consist of eight racers, each with their own unique name and picture, accompanied by their own statistics – reflexes, skill and fighting spirit – which are rated from very high to very low. To even the balance, if your reflex skills are good then your fighting spirit will be a little less than average.

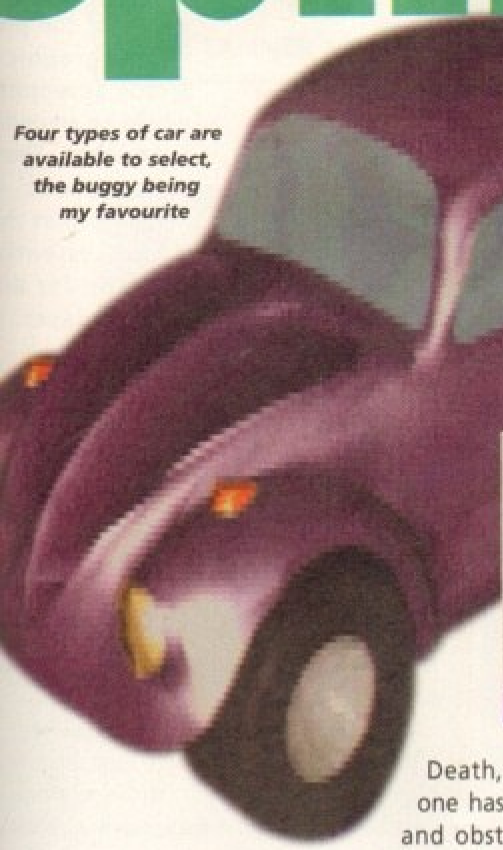
UNITED NATIONS

The racers themselves are all from various nations around the globe, from good ol' blighty to Japan, each wanting to bring the championship home to their respective country. The idea is to race against three other contestants and try and win by completing five laps. If you finish first you will be awarded driver points which are then accumulated as you race other tracks. So far there are four tracks in Wheelspin –

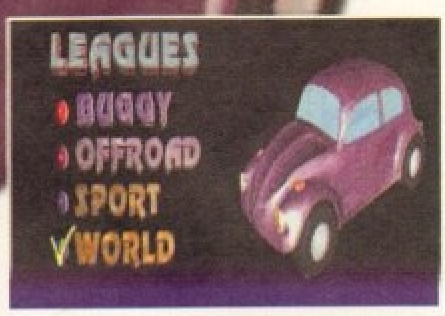


Taking shortcuts in Wheelspin are possible, only they're not always counted as a lap

spin



Four types of car are available to select, the buggy being my favourite



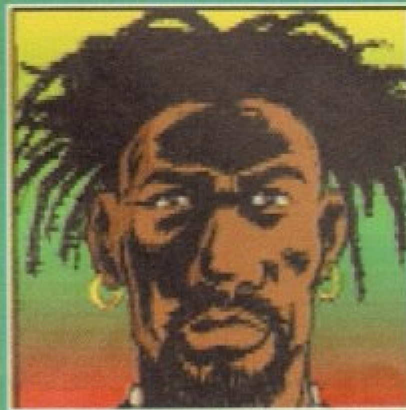
Death, Sea, Desert and the Boh Track. Each one has its fair share of corners, bends, jumps and obstacles, and the trackside graphics are superb, giving a very polished impression. With the graphics being ray-traced and it being a reasonably fast scrolling game, I expected some kind of slow-down that would have had a serious effect on the gameplay. However, there's no slow-down as yet – it runs as smoothly as Skidmarks!

Two-players can take part in the action via a split screen. This increases the fun immensely by allowing much stiffer competition, as a human player will be twice as hard to beat as the computer.

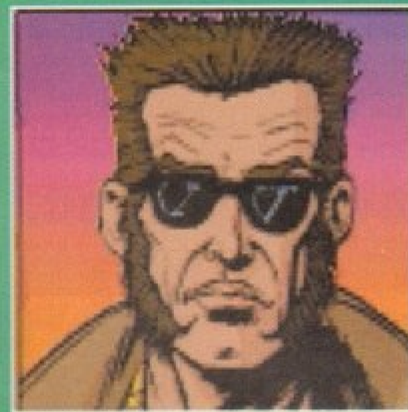
Although the game is still at a very early stage, I'm sure many features will be tweaked to improve it. At the moment, the computer opposition tend to get stuck in the walls and take a considerable time to get going again. Also, the collision detection hasn't been defined properly, so at present your car seems to crash into objects that aren't even there – shadows too!

I can't knock the game at the moment because it's far too early to take an overall view. Having said that, Wheelspin is looking very good – graphically-only though. If Black Legend can match the gameplay along with the graphics they'll certainly be onto another sure winner.

The wheelspinners



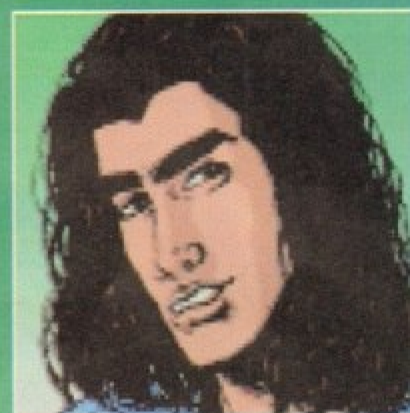
Rashid Owita
Reflexes: very low
Skill: very low
F. Spirit: very high



Norman Bull
Reflexes: low
Skill: very low
F. Spirit: very high



Michelle Craton
Reflexes: low
Skill: low
F. Spirit: high



Luca Ruggeri
Reflexes: normal
Skill: normal
F. Spirit: normal



Klaus Koll
Reflexes: high
Skill: normal
F. Spirit: normal



Andrew Natoli
Reflexes: very high
Skill: high
F. Spirit: very low



Takeshi Hinoki
Reflexes: High
Skill: very high
F. Spirit: high



Steve Jones
Reflexes: very high
Skill: very high
F. Spirit: very low



Be careful not to fall of the edge. It wouldn't be very healthy now would it?



Make sure you avoid the robots, as they have a particularly long firing range



Andy Maddock takes a look at some more mouth-watering essential prospects, this time delving his hand into the lucky dip of arcade adventures

Flashback

AMIGA PLATINUM AWARD

Flashback, released on the Amiga a while ago, was one of the greatest animated games around. If you can recollect an earlier game by the title of Prince Of Persia, which was released many moons ago, then you'll have an idea of what Flashback is like in respect to presentation.

You take control of the hero, Conrad Hard, in the year 2142. Belonging to a secret fraternity, the Galaxia Bureau of Investigation, you are in great danger. Conrad exposed a secret piece of machinery that fabricated inhuman beings, and his only immediate notion was to warn the authorities. But wait, now your woman has disappeared. Immediately suspecting these individuals of abduction, Conrad sets out to redeem his fiery-haired temptress, Sonya.

The establishment behind these foul deeds were well aware of Conrad's intentions and instantly set out to capture him. Conrad, being the hero, escaped on a hover bike while chased by two of the most fearful of villains. Laser shots were exchanged, resulting in Conrad plummeting into a vegetation land covered with trees and rocks. When Conrad regained consciousness, he thought he was safe.

Flashback arrived courtesy of Delphine Software, landing quite prominently into the Amiga market at a time when it was in its prime. What really gave it the edge over other platform adventures were the outstanding graphics and animation. The recently discovered methods of rotoscoping were rarely used to such efficiency as Flashback.

As said before, Prince Of Persia stretched the graphics to the extreme and sadly the adventure didn't quite live up to the graphical capabilities. We all know by now that superb graphics don't add to the actual playability – to achieve a high grade, graphics and playability must be of the highest standards.

Flashback boasts these qualities to the highest degree. The music begins atmospherically and as the action hots up the drums become aroused and start beating just like a film. The quality of the entire package cannot be explained enough. To say this is one of the premium graphical arcade adventures would be an under statement. There is no doubt in my mind that this is an essential purchase for any games player. A pure classic.

- Publisher: Kixx XL
- Developer: Delphine Software
- Disks: 4
- Price: £16.99
- Genre: Arcade adventure
- Hard Disk: Yes
- Control System: Joystick/keyboard
- Supports: All Amigas
- Recommended: 68000 upwards

90%

Syndicate budget/CD32

AMIGA PLATINUM AWARD

Syndicate is about being a young executive for a European Syndicate in a world where corruption and crime is business, a world where only the pure enduring of residents can subsist. Custom built cyborgs are being used as marketing ploys to sell the CHIP – a powerful implant which can be inserted into the necks of anthropomorphic beings to alter their minds, to see things others will never see. Better than any drug.



Four of your specialised cyborgs take to the streets to assassinate one of the members of a rival syndicate

Inevitably, pirating of the CHIP was imminent and therefore, resulted in bribery and murder – much of a norm when the syndicates began to take over the entire globe. These custom-built cyborgs were automated to hunt down combatants and traitors, transmitting the idea of desolation and spreading predominance around the world.

The object of the game is to dispatch your syndicate agents into neighbouring countries, draining them of rival syndicates. On completing the missions you can manipulate that particular state – raising taxes and so on. Only by procuring complete control will your coalition triumph.

You begin the mission with several agents, but only four on screen at any one time – you can enlist stronger members for more perplexing missions. Your first mission objective is to assassinate one of the main army colonels who has apparently been stealing resources from your weapons division.

Syndicate is, and will always be, one of the finest games to include such high quality graphic detail mixed with intriguing gameplay and adventure. The graphics themselves are superb, with excellent introduction sequences, leaving you with a overall view of a completely new virtual world. Games of this calibre should never be overlooked – Syndicate will give you weeks of absolute gaming bliss. A true essential.

CD32	Budget
Publisher: Mindscape	Publisher: Hit Squad
Developer: Bullfrog	Developer: Bullfrog
Disks: N/A	Disks: 4
Price: £35.99	Price: £16.99
Genre: Arcade adventure	Genre: Arcade adventure
Hard Disk: N/A	Hard Disk: Yes
Control System: Joypad/Mouse	Control System: Mouse
Supports: CD32	Supports: All Amigas
Recommended: N/A	Recommended: 68000 upwards

92%

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Return to DOpus

Amiga Medical Part 7



Frank Nord re-visits the Directory Opus config file

Going back a couple of months, you will remember I spent a couple of pages giving some advice about configuring your Directory Opus setup. Well, space is always the enemy in publishing and there's always something more to be said. So here's a few more tips to increase your file management productivity.

First up, you might not know that Directory Opus has some internal functions that aren't immediately obvious. For instance, you know how to click the left-most edge of the directory list to move up to its parent, but did you know that you can click with your right mouse button to get straight to the root directory of whatever device you are displaying? This can certainly save a lot of time if you have several layers of directories.

Another great time saver is the bottom-left button in the small cluster of buttons at the junction of the two directory windows. You know the ones, they are marked B R S A. You are probably aware that clicking on the B with your left mouse button will bring up a list of all the directories buffered in memory, but if you are running low on RAM:, try clicking on it with your right mouse button. This will free up any buffers held in memory, apart, obviously, from the ones currently displayed.

SELECTIONS

However, the button that's most useful, to me at least, is the one labelled S. This button lets you select filenames by certain criteria if you hit it with the left button, but if you use your right mouse button on it, it shows you a complete list of devices, volumes and assigns. Much quicker than having to trawl through the drive buttons or typing the path into the text field under the directory window.

As for external applications, there are a couple more I didn't mention last time around. The first will be of use to anyone who owns a copy of AdPro and has access to the program 'Splitz.' In case you aren't familiar with it, Splitz takes a file that is too big to fit onto a particular sort of media and splits it into user-definable chunks. Then you use Splitz's companion program, 'Joinz', to rejoin the chunks back into a complete file at the other end.

This is mainly designed for people who need to move large bitmap files (well, it does come with AdPro, after all) from one machine to another. You can add Splitz functionality to Directory Opus quite simply by creating a button for Splitz and applying the following rules:

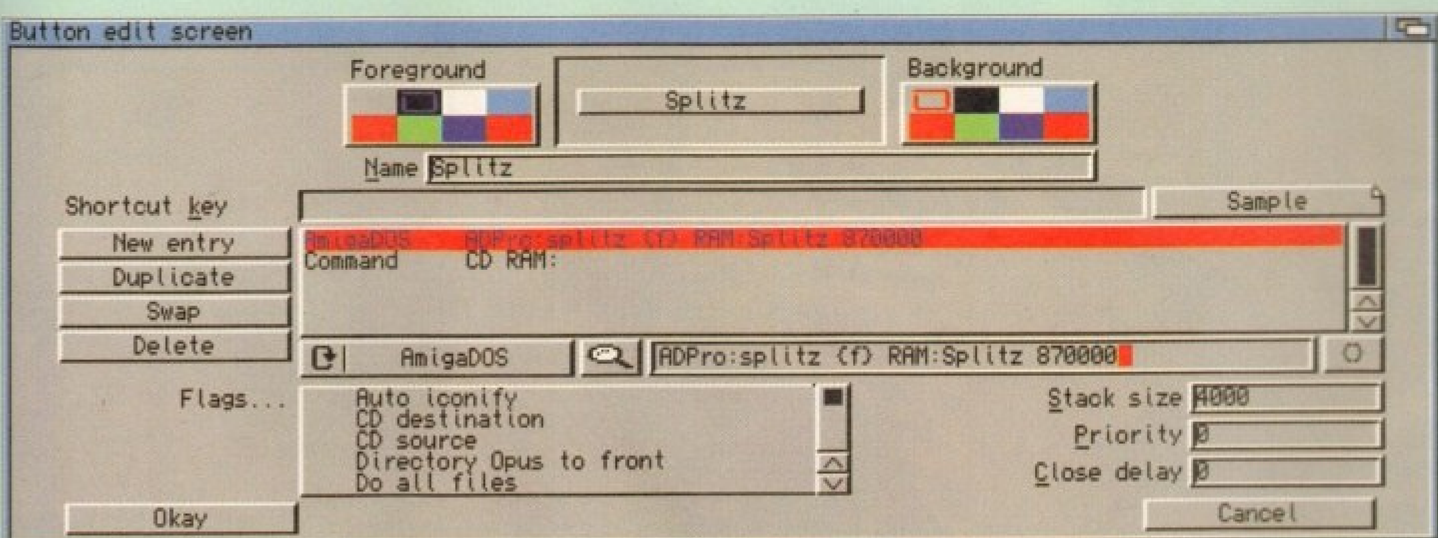
```
AmigaDOS  ADPro:splitz {f} RAM:Splitz
870000 Command         CD RAM:
```

You should have flags set for Output Window, Rescan Source and Rescan Destination. What the button will do is take any file you have selected and split it into chunks roughly 850k in size, which is small enough to fit onto an FFS formatted disk with no trouble. If you normally use Splitz for transferring stuff on double-density PC-formatted floppies then you should use a value of 720000 or less.

Now the only problem with this setup lies in the amount of free memory you have. If it is low, I suggest you change the part where it says 'RAM:Splitz' to something like 'HD1:temp/Splitz.' Of course, you are still going to need enough room on your hard drive.

Another useful button to have is one that generates a ReadMe file ready for you to edit. For this I have set up a button that copies a pre-defined empty text file with an icon which has a text viewer as its default tool, something like more or multiview would be ideal, into the current destination directory. Don't forget to turn on the Rescan Destination flag so that the readme file shows up.

One last gizmo is a commodity called CacheFont which you should have found on last month's CoverDisk. Cachefont comes in two parts: There is the cachefont command itself, which goes in your startup-sequence, and there is the MakeFontList command which has to be run every time you add or subtract fonts from your system. You can very easily add a button to your DOpus palette which calls the command up from the C: directory. It doesn't take any arguments so you should find it pretty simple to set up.



The number of different tools you can add to DOpus is only limited by your ingenuity

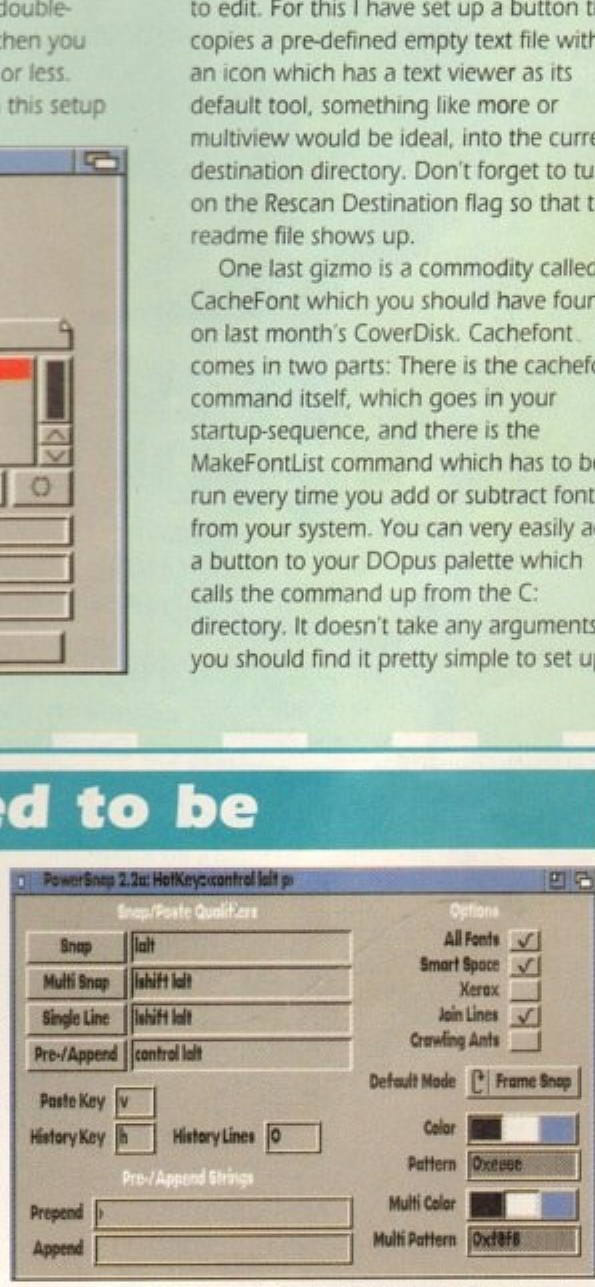
Nostalgia ain't what it used to be

In my never ending quest to help Amiga owners everywhere, I sometimes forget that not everyone has access to all the latest software and hardware to check things out, and most of you will probably not have owned an Amiga as long as I have.

So I decided to call your attention to tools and utilities that make my job easier but might be a little old, so not in the headlines. One of those very utilities is a commodity called PowerSnap. The latest version of PowerSnap came out early last year, but it has a long history.

PowerSnap lets you copy text you would not normally be able to copy to the clipboard and then paste it in any package that supports the standard Amiga clipboard. For instance, earlier on in this article I gave you the information to set up a Splitz button and you saw the two commands needed to get it working. I could have remembered those two commands, after all, they aren't exactly complex, but with PowerSnap I can just hold down a key and drag my mouse over the text on the screen and copy it to the clipboard. Then all I have to do is simply paste it back into the text editor I am using to write this text and hit the Paste shortcut. Much easier and probably safer too.

PowerSnap also comes in real handy if you have set up an Aminet Index button in DOpus, as I explained two months ago, because it means you don't have to write the filenames you want to get on a piece of paper, you can just paste them into a document for Batch FTP, or as a scratch pad while you use your ftp program.



PowerSnap might be a bit old, but it's still superb

Amiga 3D Part 5



Clones, copies, and cutting

Stevie Kennedy looks at another trick to keep the concept of 'work' as far away from modeling as possible

Modeling can be a real drag when you start on something and realise the job's more of a slog than you'd anticipated, can't it? We've looked at ways to make models as close to reality as possible and the need to keep your polygon count down, but there are some situations which get complex and there's nowt you can do about it.

On the other hand, sit and think for a minute or two and you can at least cut a lot of the work out of creating a complicated model. LightWave and Imagine are both fairly adept at this sort of operation, but both differ in their approach.

Cloning, for example, is a technique which can save a great deal of time and which cries out to be used in some circumstances. When using Imagine, the artist has a lot of control over the cloned objects, much more so than LightWave users.

Take the example of a Sherman tank model. It's easy to predict that the tank tracks and the road wheels are going to be the most hasslesome parts of the object to build, and Imagine users can thank their lucky stars that the cloning process can incorporate automatic rotation.

To create the tracks, just build one link as simply as you can safely get away with, then build a path in the shape of your tracks and use the Mold requester to access Imagine's Replicate function. When the replicate window appears, you'll notice it contains a couple of powerful options. Objects can be replicated along a straightforward length if you need a straight line of them, but our tracks will have to be created with path cloning. Problem: the closed path means our object has to rotate through 360 degrees. Imagine's answer is the 'align Y to path' option which will force the object to follow the curve of the path as it is cloned around it.

POWER TOOLS

In the lower half of the window are even more powerful tools which can be used to create almost any spiral or other such effect. By simply telling Imagine to rotate various amounts in the three axes, it is easy to make an object tumble around its centre as it is replicated – ideal for all sorts of modeling jobs. In LightWave, the path clone function works with very unreliable results and the rail clone option (using a curve in a background layer) offers no control over axes alignment or rotation. The upshot is that creating the Sherman's tank tracks in LightWave means performing the clone operation, then working one's way around the long chain of links you've just created, and rotating them all manually. Ugh.

In other ways, however, LightWave makes up for this painful omission. Using a system of eight layers makes it so much easier to cut and paste copies of objects around and use them more than once, that you'd be mad not to take advantage.

The body of our finished Sherman is an easy job to begin with, and is nothing more than a slightly bashed-in box with a turret ring in its most basic form. When you start to add a bit of detail, though, it's easy to cut right back on the workload.

For example, in such a symetrical arrangement (tracks, wheels, lights, and other detail found on both sides of the object), the Mirror tool comes into its own. Always add the next level of detail in a different layer before committing it to your main model layer, and never miss an opportunity to use Mirror or just good old fashioned cut and paste.

LIFELIKE

On the front of the Sherman there are a number of details added to give the object some life, among which are a few spare track links (copy and paste, no need for more modelling), some road lights (mirror one to make the other), and hatches. The latter were created once, then resized and tarted up to make all the other hatches on the tank's body and turret.

Again, the wheels are constructed initially from just a few polygons. One was used to create the side supports, another was used for the suspension struts, then both were extruded. The wheels themselves are just extruded discs with a slice drilled out, though they use plenty of sides as the object is intended for a few close-ups.

Copy this lot a few times, add one or two other touches and you can build what looks like a complicated set of wheels in about half an hour. The mirror function takes care of the wheels on the other side of the tank, so your manual labour is cut to the bare minimum.

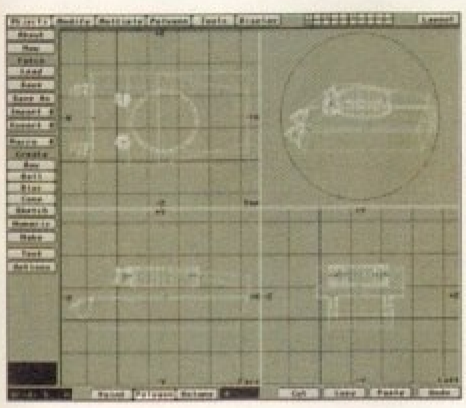


Our finished model is good enough for animations and took a surprisingly short time to create

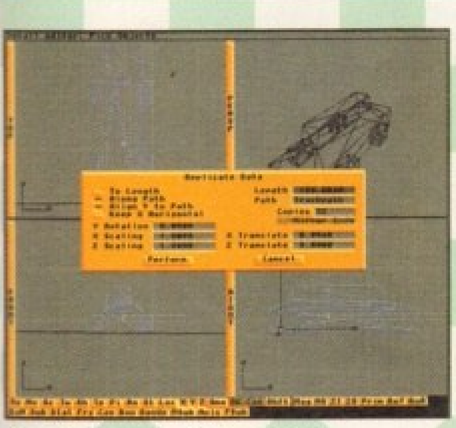
Big means fewer

When a model contains parts which need lots of detail but lots of larger areas which don't, it's usually best to make two copies – one for distant shots and the other for close-ups. For example, our tank tracks are replaced in the distant version by a double-sided polygon bent into the correct shape and brushmapped to look the part, and our wheels can be substituted by a set with fewer polygons.

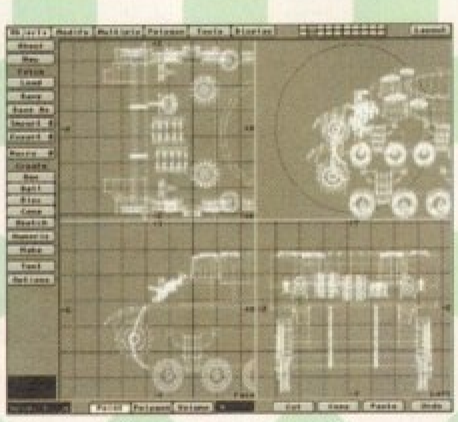
When setting up the scene involving the tank, it's just a matter of cutting from one 'take' to another without making it obvious that the models are different. With a bit of deft editing, it's possible to make it look as though the fake tracks are going round and round (a simple image sequence does the trick), then cut to the stationary tank and the more complex wheels in all their glory.



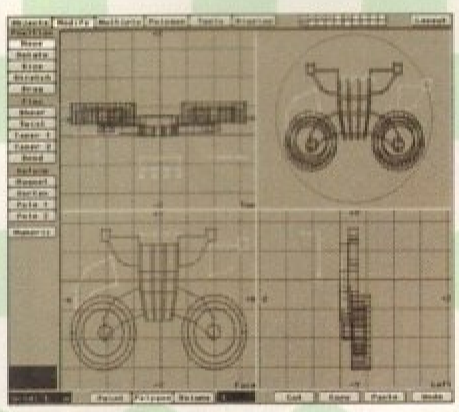
Keep the model simple and use substitute parts for more distant shots so that rendering times are reduced



Imagine's replicate function is much more flexible than the LightWave equivalent



The model becomes necessarily complex, but our job is made easier with a bit of clone automation



You can build an effective-looking model by starting with some simple polygons and using the modeling tools intelligently

Cursor positioning



More console device info as Paul Overaa provides details of how cursor positioning sequences are created and used

Although last month's menu script provided a cursor positioning function, I didn't go into detail about how it actually worked. This month I thought I'd set the record straight and discuss the underlying mechanism, namely the console device control sequence needed to cause a change in cursor position.

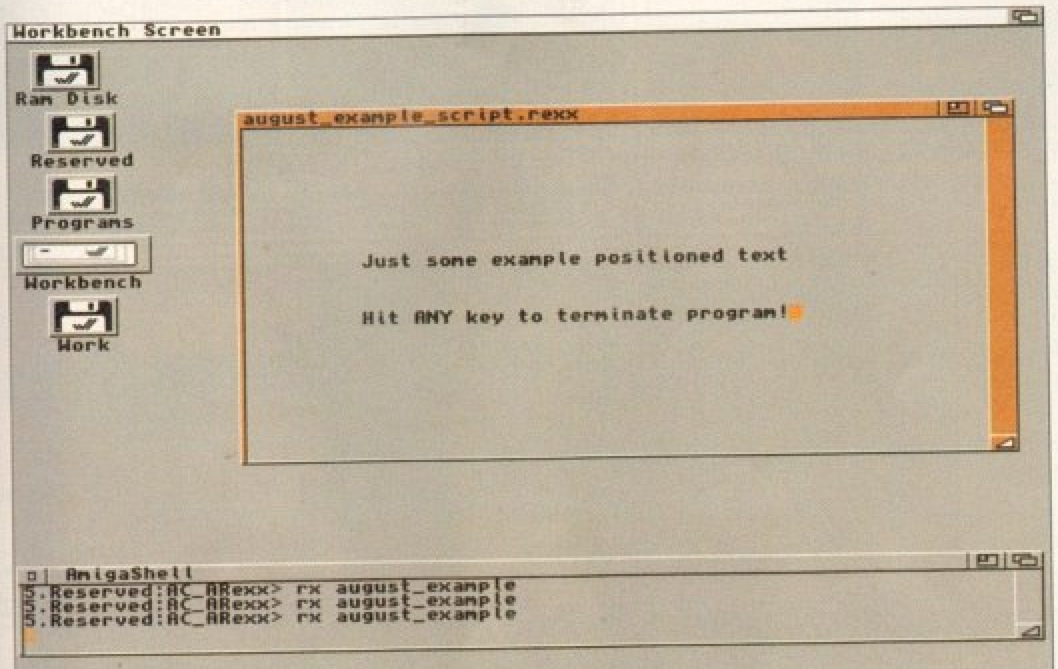
In hexadecimal, a general cursor positioning sequence takes the form: 9b [R] [3b C] 48. The first value, 9b hex, is known as the control sequence introducer (CSI) and you'll notice in my example sequences that I tend to define this value as the variable CSI, and then use this term rather than the numerical value itself (a convention I use for almost all constant terms, since it helps make the resulting scripts easier to read).

R represents the display row and C the display column, while the 3b hex value is a 'separator' that allows the console device to distinguish between the two real row and column parameters. The brackets indicate items that can be treated as optional and this means that not only can either row or column positions be omitted, but the 3b hex separator (which is in fact an ASCII semicolon character) need only be provided when both row and column values are given or when just a column value is specified. In other words, a row position on its own can be moved to by sending the simplified three character sequence: 9b R 48.

With any script that makes more than passing use of cursor positioning, the best idea is to create an isolated SetCursor() function that takes a pair of row/column co-ordinates and sends the appropriate command sequence to the console window. Listing 1 shows a typical function and you'll notice how the actual row (r) and column (c) values passed to the function are easily embedded into the general form of the sequence by using the ARexx '||' string concatenation operator.

The benefit here is that by isolating the cursor positioning code into a separate function, the main body of your script will be 'cleaner', i.e. tidier, and therefore more understandable to both yourself and anyone else reading your code. Cursor position is then performed using statements like 'call SetCursor(10,0)' rather than continually having to embed actual control sequence data throughout the code.

Of course, it's also possible to go one better than this and create a function that takes both the cursor position and the text to be displayed as function arguments. Listing 2 shows a typical routine called CursorWrite() and this would, for example, allow you to position and write error messages, incidental text and so on using easy-to-understand statements like 'call CursorWrite(10,0,SIGN_ON_MESSAGE).'



Run this month's example from a shell window using the ARexx RX command

```
SetCursor:
parse arg r,c
call Writech(raw_window,CSI||r||'3b'x||c||'48'x)
return
```

Listing 1: A simple cursor positioning function

```
CursorWrite:
parse arg r,c,text$
call Writech(raw_window,CSI||r||'3b'x||c||'48'x)
call Writech(raw_window,text$)
return
```

Listing 2: Text writing with cursor positioning

```
CursorWrite: Procedure
parse arg window,r,c,text$
CSI = '09'x
call Writech(window,CSI||r||'3b'x||c||'48'x)
call Writech(window,text$)
return
```

Listing 3: A more general form of the CursorWrite() function

Generalising the code

With small functions such as the ones I've been discussing, it's not too much hardship to incorporate suitably modified versions of the code into an ARexx script whenever cursor positioning is needed. It is, however, a good idea to try and make such routines as general as possible, and with the listing 2 CursorWrite() routine, for example, a number of improvements could be made.

We could, for instance, pass the window handle to the routine as a parameter rather than have the window handle explicitly embedded in the function code. Similarly, ARexx's Procedure keyword could be used to isolate the workings of the routine from the script it will finally be used in.

Listing 3 shows the results of such changes, and the benefit is that this function can now be incorporated and used in your own code without you needing to worry about how it works. Simply make a call to the CursorWrite()routine passing your window handle, the row/column screen co-ordinates, and text to be printed as function call parameters, and your text will be duly printed at the specified position.

The program shown in listing 4 should help get you started. It's a runable example that opens a window and prints a couple of text messages. Look at the overall format, run and modify it so that you come to terms with the general ideas, and then copy the cursor positioning function to your own scripts and experiment!

```
august_example_script.rexx

TEST_MESSAGE1 = 'Just some example positioned
text'
TEST_MESSAGE2 = 'Hit ANY key to terminate
program!'

call
Open(raw_window,'RAW:40/40/480/200/august_exam-
ple_script.rexx')
call CursorWrite(raw_window,10,10,TEST_MESSAGE1)
call CursorWrite(raw_window,14,10,TEST_MESSAGE2)
keypress$=Readch(raw_window,1)
wait for keypress
call Close(raw_window)
exit
logical end of program

CursorWrite: Procedure
parse arg window,r,c,text$
CSI = '9b'x
call Writech(window,CSI||r||'3B'x||c||'48'x)
call Writech(window,text$)
return
```

Listing 4: Some runable example code to get you started



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Make it so!

Phil South takes us on a Net Watch special about sites of Special Star Trek Interest. Engage!



There is a lot of Star Trek action on the Internet, mostly because the kind of people you find on the Internet are exactly the kind of people who are into Star Trek. I have to say that this really excites me, but then I am the kind of sad act who, without the restraining influence of my loved one, would be off to the next convention with rubber ears and a phaser which makes all the right noises when you pull the trigger.

You should know that there is a difference between a trekkie and a trekker. Trekkies are people who are into the series in a passing sense. They'll always watch it, they might know a bit of trivia if asked. They've possibly read William Shatner's 'Star Trek Memories', which incidentally are amazing for a man who is on record as having no memories of anything.

Trekkers are another level of magnitude. They have all the episodes on tape. They have bloopers on tape. They have all the shows taped from the TV in the original edited and unedited forms. They have every book, every magazine, every video, every newspaper article about Star Trek. They have models of all the ships from all the series, a costume in their size from all the series. All the props, all the latex make-up, all the... well you get the idea.

You need to know this stuff, because once you enter the Star Trek zone on the Net you're on your own among these people, and you've got to be prepared to take it all very seriously. You have been warned.

Voyager Home Pages
http://voyager.paramount.com/

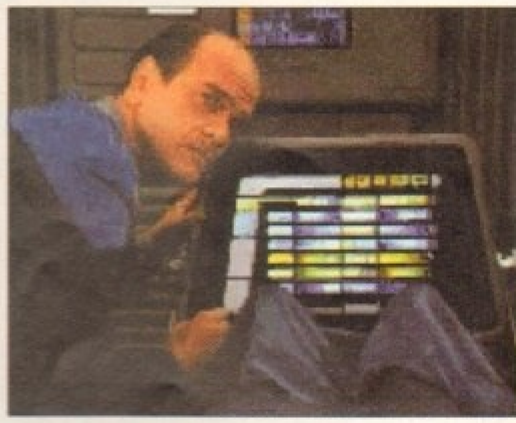
Not to be confused with the Voyager Company, which is an American company which makes CD-ROMs. No, Voyager is the new Star Trek series, and it is currently running in the US to rave reviews. This is the official Paramount site and contains all the information and pictures you would need to make sense of the series having not seen it yet. Look forward to it soon on UK screens.

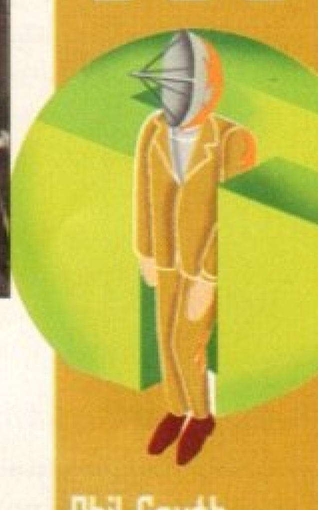
Asimov's Star Trek Pages
http://www.inlink.com/~asimov/trek-menu.html

Information about Star Trek, Star Trek: The Next Generation, Star Trek: Deep Space 9, and of course Star Trek: Voyager. I don't quite know what Asimov has got to do with it, as he is dead, but nonetheless, this is a good start for your Star Trek Web Voyages.

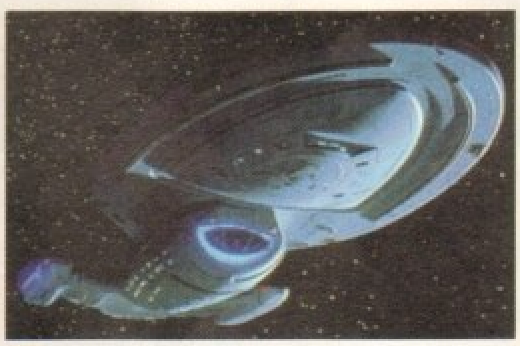
Luca Sambucci's Star Trek Pages
http://www-iwi.unisg.ch/~sambucci/scifi/startrek/st-www.html

An exhaustingly large guide to all the Star Trek Info on the Internet. It contains links to the Official 'Paramount' sites, Star Trek Clubs on the Net, Commercial sites selling Star Trek-related merchandise over the Net, various sites maintained (mainly) by Star Trek fans, articles, papers and reviews, and information about games related to Star Trek. This is one of my favourite kicking off points, and it always has something new to offer the really deeply SAD trekker. (Sob!)









Enter the Start Trek Zone and feast your eyes on these delights.Whether you're a Trekkie or a Trekker, there's plenty to keep you entertained and informed

British Starfleet Confederacy
http://deepthought.armory.com:80/~bsc/

What is it? A fan club in all but name. Members of the British Starfleet Confederacy receive a certificate of commission, officer's manual, identity card, stardate calendar and six bimonthly newsletters and chapter bulletins, as well as access to club merchandise. The British Starfleet Confederacy is run by the fans of Star Trek for the fans of Star Trek in all its incarnations.

Klingon Assault Group
http://www.iac.net/~twisty/kag.html

The KLINGON ASSAULT GROUP is a 'not-for-profit' STAR TREK fan organisation. Their growth is apparently based on "communication and co-operation. Klingon Uniforms aren't required, but to advance within our ranks a uniform will be necessary. Promotions are based solely on merit and level of involvement." These guys are sick.

Nightmare Factory Star Trek Costumes
http://www.io.com/~nightime/trek.html

Well, just when you thought you'd seen everything, now you can buy Star Trek costumes over the Net, just like the ones in the series. For example: A Captain Kirk-style gold shirt (from the original Star Trek) is $28; Next Generation shirts are $45; a gold Next Generation ladies jump-suit is $70; a burgundy ladies jump-suit with emblems and belt, as worn by Major Kira in ST:DS9 is $70. There are also authentic gold communicator pins which replicate those in the series in every detail. Same as used on TV. "Just what you need to complete the official uniform!" Oh boy.

And so on and so forth. If you want to take a voyage where no one has gone before around the Star Trek sites on the Net, then be sure to set aside a long time, as the list is growing daily and it may take you weeks to see everything.

BBS watch

If you have any BBS's you want to tell us about, then drop us a line at the usual address. This month we have Daniel Garnett, who has this to say about his BBS:

"My BBS is called NIRVANA ZONE BBS and can be contacted on (01243) 373596, 7pm-7am weekdays, 24 hours at weekends. It started in January this year, so is new to the BBS way of living. Its down in the south near Portsmouth and Chichester and is run by me, Daniel Garnett – I'm 16 years old and still at secondary school.

I decided to set up this board because one night Dad had a go at me because I was on the phone too much and the phone bill was going through the roof. So I made this board up using MAXS 1.54, to get peeps to call me instead. It worked. I now have 124 users, which I might add is growing very fast. I'm also on loads of different networks – here's a list of them, and my address:

Mininet	16:100/120
Barnet	959:100/2
Quantum Net	424:100/7
Subspace	95:112/1
Missing Linc	987:987/1
Fidonet	2:250/145.20
Internet	2:259/97.3

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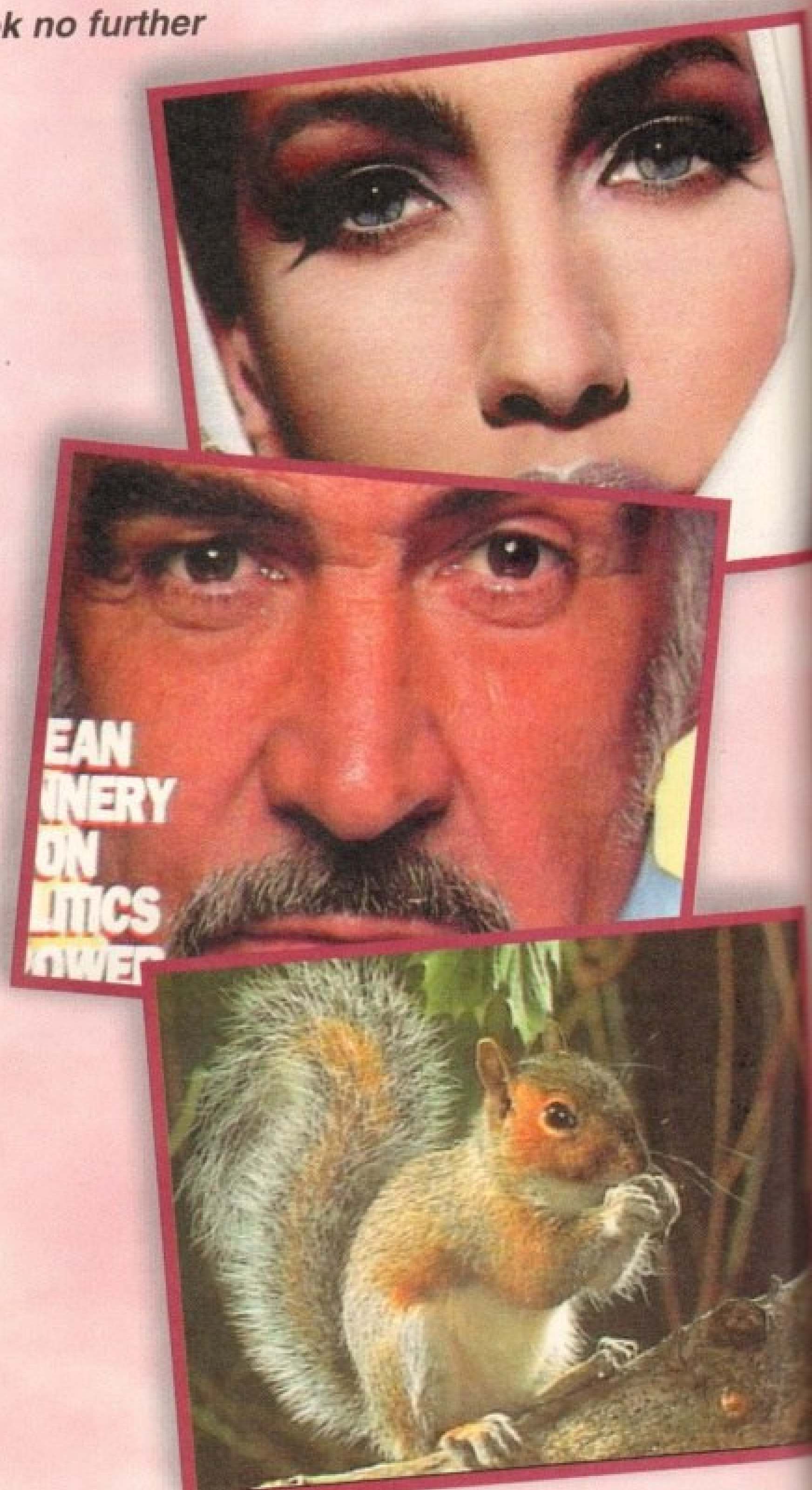
- 4096 HAM mode
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Night of the Jaggies

Frank Nord goes back to basics with the difference between scalable and bitmap fonts and clipart



As I still get letters and e-mail from people confused about the different sorts of fonts and clip art types, I thought I'd lay them to rest, once and for all, with a two-parter on the topic, so this month I am going to be looking at the wide variety of clip art formats available for the Amiga.

Before we have a look at the various formats, we need to be sure that we know the difference between structured (or scalable) clipart, and bitmapped (or image) clip art.

We'll start with bitmapped clips. These are basically pictures such as those created by Deluxe Paint. Now I know you can load a brush into DPaint and hit the h or H keys to halve its size or double it, but look at the result of these scalings. You always end up with a degraded image whether you scale it down or up.

Now, the highest resolution, in terms of dots per screen inch, attainable by a standard Amiga is about 70dpi. Compare this to your printer's resolution which is probably around 300dpi and you can see why some bitmapped clip art is so enormous. All it takes is a bit of maths to determine that you need to scale down an image to about 25 per cent (300/70) of its original size on the screen to get your screen-sized image onto paper.

SCALING

Scalable clip art doesn't suffer from this problem because it is what's known as 'resolution-independent.' This means you can scale it so that it is as small as a single pixel on your screen, or large enough to fill a stadium's worth of screens and, provided your printer has a high enough resolution and can actually print a stadium-sized image, the image will still appear at the same quality.

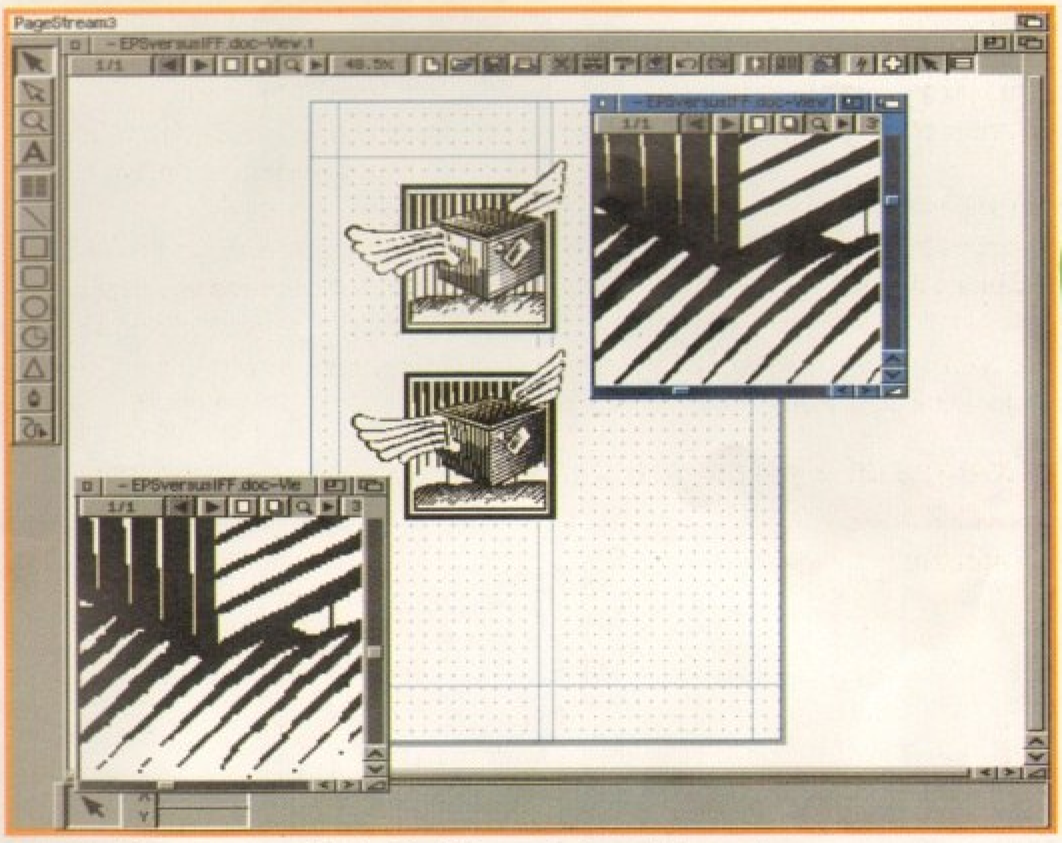
Why is this the case? Well, it comes down to the way the images are created and stored. A bitmap picture is stored as a set of pixels. If we take the simplest example, a monochrome picture, the information contained within it is just a matter of switches saying on or off (i.e. black or white). A black and white structured drawing, however, is much more complex. Structured drawings are not pixel representations of the data they contain but are defined by a series of statements of which the following is an extreme simplification:

```
Draw circle at 6,4
size 2.5
line thickness .1
```

This could be represented in Deluxe Paint by drawing a circle with a brush that is as close to .1 of an inch in size as possible, six inches from the left side of the screen horizontally, and four inches vertically from the top of the screen.

The circle should be 2.5 inches in radius. These instructions get sent to your printer so that rather than using the smallest 'brush' size, it actually prints the thickness of the circle's line to .1 of an inch, or as near as it can get to it, depending on the printer's resolution.

You will really be able to see the difference if you scale the circle in DPaint – the line thickness will also be scaled. The structured version of the circle will maintain the .1 inch thick line. As for next month, it's on to the fonts.



At a high screen magnification the difference between bitmapped and scalable clip art becomes obvious enough. But believe me, you'll really see the difference when you print out this page

PageStream progress

At the time of writing this column, SoftLogik has just informed me that PageStream3.0h will be launched onto a suspecting public in about two weeks time. Mike Loader at SoftLogik has told me that the new revision of the Amiga's most awaited software package will be the biggest update yet, and abilities such as page numbering, auto and manual hyphenation and paragraph spacing will be implemented in this release. Mike is also sending me the new add-on filters for Wordworth documents, Jpeg images and True Type fonts, so more on those as I find out.

File formats

In the Amiga's dim and distant past, way back when we still had a multitude of developers committed to providing us with software, there was a home-grown choice of file formats. Gold Disk gave us the .clip format. Clip files could potentially be a whole bunch of discrete images saved as one file so you had the opportunity to load a clip and pick one particular element from it.

An excellent idea in principle, it rather fell down in terms of providing a universal file format because Gold Disk were secretive about the way the format worked. This meant that other developers weren't able to support the format, so it pretty much died.

Another format developed in the early days of the Amiga was Aegis' DR2D file type. The first application to use DR2D was Aegis' own Draw 2000, a simple structured drawing program which never did very much on this side of the Atlantic. Commodore adopted the simple DR2D format as part of IFF which, although it gave the format official status, still didn't result in very much support from third-party developers, and DR2D is only supported by a few Amiga applications these days.

So what scalable picture format do we have on the Amiga? Well, EPS has always been popular on most platforms, although most Amiga packages still cannot show associated TIFF preview files and some will only print EPS images to a postscript printer. As far as I know, there are only two commercial packages that allow you to actually create EPS clip art – ProVector by Stylus, Inc. and Art Expression by SoftLogik.

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If you've missed any of these issues, now's your chance to put things right, by either buying an individual issue or a full six months' worth. But hurry - stocks are limited!

SEPTEMBER



An exclusive preview of the new stand-alone Lightwave PAL, plus all its essential add-ons. A first look at PageStream 3.0. Retina III, MainActor and a DIY guide to building a home studio.
ON 2 DISKS: Scroller 2, a complete commercial video titling system worth £60.

OCTOBER



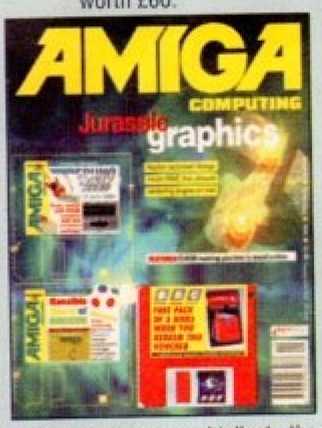
We look at the freelance graphics market to see how you can make a bob or two with your creativity. Plus: Forge, Pyromania, Picasso and Pablo.
ON 2 DISKS: 3D textures for 2D an 3D graphics applications. Plus HamLabPlus.

NOVEMBER



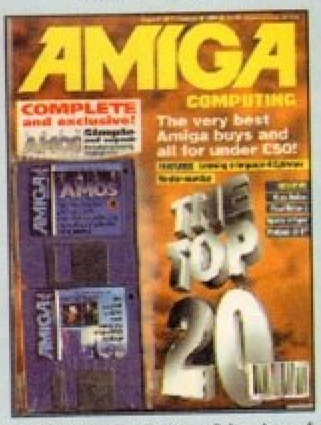
We reveal all you need to know about Amiga maintenance. Plus reviews of Warp Engine, Image F/X 2 and 3D CD's.
ON 3 DISKS: Demos of Batch Factory, Edge, Top Gear 2 and a host of shareware titles to dip into.

DECEMBER



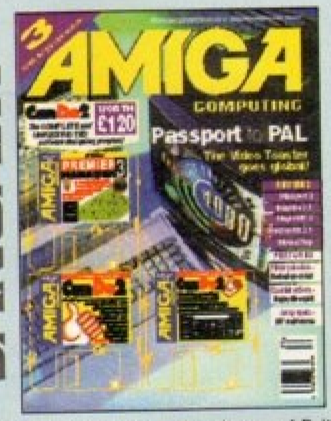
AC test drives the Raptor accelerator and talks to the people who use it to create their commercial graphics. Plus reviews of World Construction Set, Wavemaker, TurboCalc v2 and Bertie Bunny!
ON 2 DISKS: The complete version of TechnoSound Turbo and a fully playable demo of Sensible World of Soccer.

CHRISTMAS



Want a list of the top 20 best Amiga buys? Look no further than our countdown of the cream of products for your machine. Plus a monitor roundup, Final Writer 3, VLab Motion and more reviewed.
ON 2 DISKS: The complete, exclusive Easy Amos – all yours free with *AC*.

JANUARY



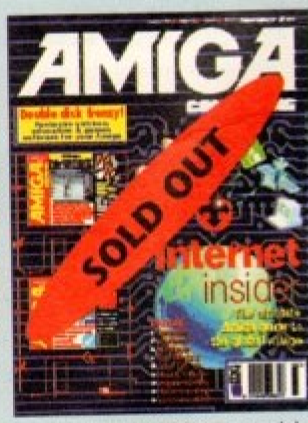
The Video toaster finally arrives on the shores of Britain with the help of the Passport 4000. Also take a look at Imagine 3.1, Wordworth 3.1 and see hidden 3D pictures with StereoCAD.
ON 2 DISKS: The full version of Can Do 2 and a demo of the acclaimed football tactics game, Premier Manager 3 from Gremlin.

FEBRUARY



We go behind the scenes of Aardman Animations, those talented folk responsible for The Wrong Trousers and a rather large quantity of TV commercials – most of which have been given a helping hand by the Amiga. Plus reviews of Termite, Photogenics and Gamesmith.
ON 2 DISKS: The complete and unrestricted version of AnimWorkshop and a chunk of shareware products to boot up and use.

MARCH



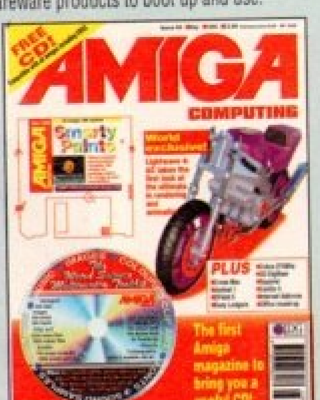
Take a walk through the Internet with our concisive guide. Plus reviews of the excellent MultiLayer, InfoNexus and Datastore.
ON 2 DISKS: DirWork, 10 out of 10 Maths Statistics demo and 10 out of 10 Driving Test demo as well!

APRIL



We go behind the scenes of Cyberjack, a film whose special effects are being created entirely with Amigas. Plus reviews of Hollywood FX, Final Data, Studio Pro II and Dice C Compiler.
ON 2 DISKS: Get online with our Demon Internet software. Use the complete version of Database and Spreadsheet software from the Mini Office package.

MAY



We take the first look at Lightwave 4 and its improvements. Plus reviews of Cross Mac, DPaint 5, Aminet 1, Cobra 275MHz and CanDo 3.
ON THE COVER: A free CD crammed with 547Mb of files to use with your Amiga. Plus the complete version of Smarty Paints, the art package.

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Debugging nightmare

Phil South looks at solving some of those Amos coding problems

Not a day goes by without someone e-mailing or writing to me and saying they are having a problem with Amos. It's not that people are stupid or that Amos is buggy, it's more that coding is a specific talent and only a handful of people take to it as a natural thing.

It requires a certain sort of mind, a pattern-recognising mind and a keen mathematical brain. Of course, you can do it without either of these things, but you can't do it quickly or without problems. Most problems are easily solved as they are simple problems with the logic of the program: The flow of the program is constricted or misdirected in some way.

To help you debug your Amos programs, here is a simple all-points guide to debugging and program design.

1. **Check your loops** – if there is a FOR/NEXT, IF/THEN, WHILE/WEND or similar thing in your program, check that the loops are nested and not crossed:

```
If
Then
For
Next

and not

If
For
Then
Next
```

Uncross your loops and you will be flying. (Now there's a sentence you wouldn't find in any other columns!)

2. **Check your flow** – related to loops is program flow. The best way to debug a program is with Computer Number One: The brain. Take a piece of paper and a pencil and go through the program step by step, doing all the calculations with a calculator if necessary, checking that each bit of the program is in the right order.

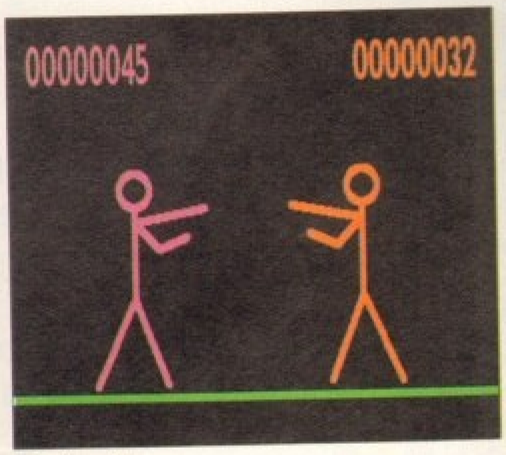
Do the loops and see what happens. Look at each instruction carefully and interpret it like the computer would. When you've run the program, does it stop where it should or does it just go round and round?

3. **Then run it for a speed test** – after you've done the preliminary bug test, do a run test. Some things will look good on paper, but when you are really running, speed becomes an issue. Does the computer pick up any key presses or mouse keys, or does it skip them? When you are running at computer speed things happen fast, and sometimes something happens so fast it can't be seen or read by the procedures you have put in place.

When you ask the computer to sense anything like a key press or a mouse command, the computer needs to use a 'flag.' No, not a big fluttery thing on a pole, a variable which flips over one way to tell the computer the key has been found and there is no need to look for it any more. For example:

```
If Fire(1) and FFLAG=0 Then Sam Play 1 : FFLAG=1
```

When the fire button is sensed, the sample is played, and the flag FFLAG is set to 1. This means you can run this loop again and if FFLAG is still 1 then the rest of the line will be ignored. Flags are useful habits to get into.



Go from this...



...to this in easy steps

4. **Syntax errors** – these will show up generally, but sometimes it will not be clear why there is a problem. Your first port of call should be the manual. Check the syntax in the book against the syntax in your program, and see what the difference is. It could just be a few commas with no figures between them:

```
,,,,,
```

after a command. Some commands allow this even when there are no numbers in there – the command will still work as if zeros were there.

Other syntax errors are to do with the way listings are published. If you put a long line with no breaks into a word processor or a DTP program (like those used to put this magazine together) the chances are the line will break on the last convenient space so as not to break up any words. For example:

```
xx xxxxxxxxxxxxxxxxxxxxxxxxxxx
```

will end up like this:

```
xx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

If these x's were commands then you'd be looking down the sticky end of a syntax error, like the one mentioned in a previous column for the Easy AMOS tutorials.

5. **Don't be too ambitious** – okay so we all want everything now, and making do with simple programs can really wrinkle our snouts, but don't be tempted to take on too big a project in one go. I get people writing to me all the time saying: "I'm writing a simple neural network program and can't seem to get it to work. Could you supply me with a listing of the basic algorithm?" or "I'm writing a 3D game which uses vector graphics. How do these work in Amos?"

This is nuts. Listen people, take these things in easy stages. Don't leap right in and start coding a big project – start small. Nothing you do will be wasted because you never start any project from scratch. You always re-use code.

I have a basic collision detection routine which works and I use it in all my arcade games. I also have a flag routine, a sound routine, a music routine and a lot of other routines, like vectors (not 3D graphics but ways of making things bounce correctly) which I use in all my code. You can keep using code you write and build up to the big program.

No big program was ever written in a day like a letter, from one end to the other. It doesn't work like that. Coders re-use their code all the time. Start developing small routines which do one job well, and then use them as sub-routines in your future work. This way you will only be debugging small programs one at a time and then bolting them together, rather than writing a huge 10,000 line behemoth of a program which would take Microsoft a year to debug, let alone you on your own working in your spare time.

So there we are, good luck, and take careful note of all these points. You won't go far wrong.

Write stuff

If you have an Amos question, or a routine you'd like to share with the world, then please write to Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP. Please send routines on an Amiga disk with notes on how the program works on paper. Make the routines short (use these routines as a guide) and make them reasonably independent of any graphics and sound support files, although I will make provision for these if necessary.

OctaMED V.6

It's thumbs up from Paul Overaa for the latest version of this famous tracker program



The new version of OctaMED Pro has now officially arrived, and while there are many extra facilities thrown in, the big attraction is almost certainly going to be the yet further improved user interface. In fact, as soon as you load version 6 you'll notice the change because the main screen is now split into a number of separately rearrangeable and/or resizable windows.

At startup there's a main control window, the tracker editor itself, and an information window on display. Other windows, for things like tempo control, are now, therefore, only opened when required. The upshot is that the new display looks, and in practice feels, much less cluttered. Another benefit is that users can now arrange windows to suit their own way of working.

The main control window contains the playing buttons, instrument details, window opening gadgets and various other buttons and checkboxes. Most of the changes here are self explanatory – version 6 can, for example, handle 16-bit sound samples, so the instrument size box now shows a 'W' (for word, meaning 16-bits) against any 16-bit samples that are loaded.

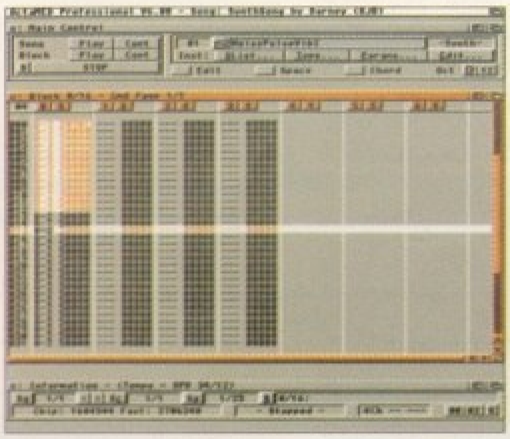
ALL CHANGE

The tracker editor has also undergone some changes. Scroll bars and a sizing gadget have been added and there is now more space between the tracks (the bar equalizers, which used to be an integral part of the tracker display, have, incidentally, also been moved into their own separate window). Another new feature is a tempo operations window which allows much easier conversion between the various methods of setting OctaMED tempos.

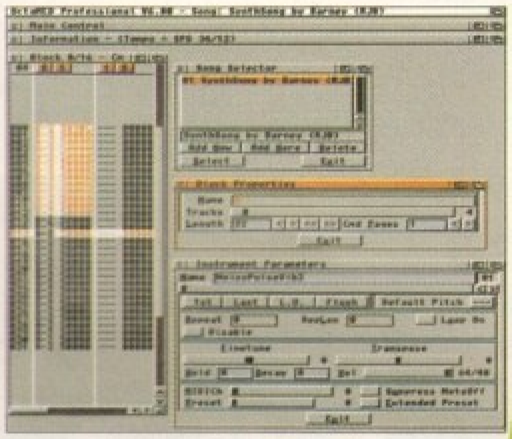
Most of the new menus and option changes reflect either the changed window arrangements or the new facilities provided. There are new menu items for on-line AmigaGuide help, opening a shell-like window for inputting ARexx commands, temporarily freeing up the Amiga's audio channels (so that you can run other music programs without having to quit OctaMED completely), and so on.

There are additional menu options for re-opening various windows, new menus for tools and loops, options for facilities like Midi file type 0 saving and Midi file type 0 and type 1 loading, use of XPK or Powerpacker-oriented compression and various other items.

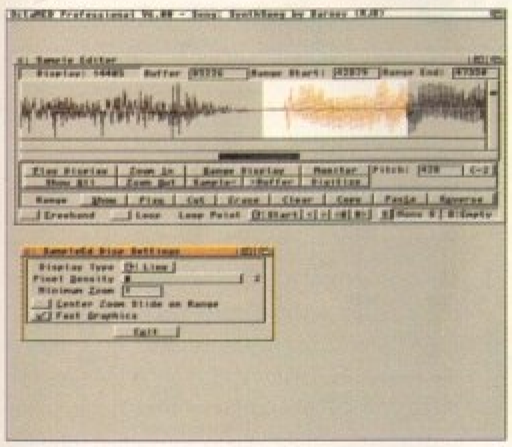
With version 6 you can use both 8 and 16-bit stereo samples and, as well as continued HiSoft Aura support, there's a Toccata Capture window for users of Toccata sound cards. Version 6's changed internal buffer arrangements are also worth a mention because previously, copy/cut style edit operations all used the same buffer. Now, block, track and edit menus each have their own separate buffers so you can have block, track and range edit information all stored in memory at once.



OctaMED V6's new initial display



OctaMED's multi-window arrangements make the program much easier to use



The new style sample editor

No regrets

With modern-style windows containing 3D look gadgets and boxes, plus all the other standard bits and bobs that users are now beginning to expect from all commercial Amiga software, OctaMED version 6 is a significant advance on previous versions.

While there is little or no doubt that this tracker program now stands head and shoulders above all the competition, version 6, however, is still clearly just a development stepping stone to the OctaMED Pro Sound Studio package due to arrive towards the end of this year.

Just in case you're tempted to hold back until the Pro Sound Studio package appears, you might like to know that it has already been decided that version 6 users are going to be given special upgrade consideration when the Pro Sound Studio finally arrives. Of course, the final decision on upgrading to version 6 is up to you, but my advice is to jump on the version 6 bandwagon as soon as possible – you won't regret it!

Other changes

One of the most significant additions with version 6 is the provision of ARexx support within OctaMED itself (the standalone player program has of course been ARexx controllable for a long time). The ARexx command set certainly looks comprehensive and, in theory at least, is going to enable users to perform sophisticated automated song edits. It remains to be seen, however, how much interest users will actually take in this facility because many Amiga owners still seem to have a mental block when it comes to ARexx macro use!

Other changes include provision for saving modules as executable files, support for MAUD, AIFF and PC .WAV samples, and an easy-to-use bank of buttons in a chord selection window which let you select and modify a range of pre-set basic chords. As you might expect, there are also some less important, but nevertheless useful, new functions incorporated as well. Provision for switching off 'File Exists – Overwrite?' requesters, and being warned of potential 'disk full' conditions before a file save are just two of the extras now available and there are many more. Another very welcome addition is the inclusion of a printed 'Get You Started' tutorial manual.

SYSTEM ESSENTIALS

RED = Essential **BLACK** = Recommended

(release 2+ only)

1 Mb

RAM

The bottom line

Product: OctaMED Version 6
Supplier: Seasoft Computing
Tel: 01903 850378
Price: UK – £35 + £1 p&p (includes manual)
Registered OctaMED V5 users pay £25 (+ £1 p&p) and should return their original V5 disks when ordering.
Various other price arrangements are available for MUG (Med Users Group) members, European sales and so on.

Ease of use	**8**
Implementation	**9**
Value for money	**10**
Overall	**9**

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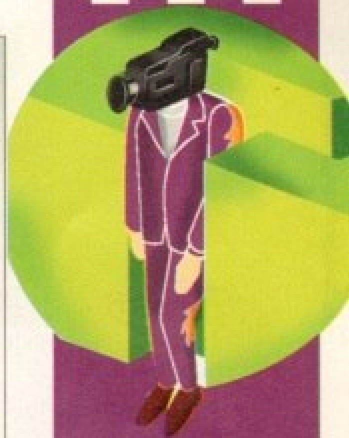
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Spaghetti junction

Gary Whiteley gives a helping hand with cable making



There's no doubt that without cables and connectors your Amiga, TV and video, stereo, telephone, lights, musical equipment, coffee maker, fish tank, microwave (and anything else in your home that uses electrical energy) will quickly come to a halt, though under normal circumstances the cables and connectors do their job, passing signals or currents from one place to another to generally make your life easier.

However, what happens when things go wrong? Do you call out a repair-person, or buy a new cable to replace a faulty one – or do you take matters into your own hands and get stuck into a bit of electrical DIY?

This month, I'm turning my attention to some hints and tips on making and repairing cables. But don't worry, many cables are quite simple to build or repair yourself, and if you've got the right tools and can follow a few basic rules, can read numbers and don't have severe colour-blindness, then you could be sorting out many cable problems yourself instead of buying expensive new ones or paying out for repairs.

To make or repair your own cables you'll need a basic set of tools (see the accompanying list) which will obviously require some financial outlay, but if you take care of them then they'll last you for years – so they should make a worthwhile investment. Buy the best you can afford, since cheap tools don't usually last as long as quality ones. You should be able to find everything you need at a local electronics shop such as Tandy or Maplin.

MATERIALS

In addition to tools, you'll also need the raw materials to make your leads – in other words the connectors and the wiring cable itself. The cable and connectors are usually specific to the job in hand; a simple audio or video lead often only requires a piece of screened single or two core cable and comparatively simple connectors, but RGB, SCART or modem leads need multicore cable and more complex connectors. If you're not sure what the name of the connector is that you need to replace or repair, take the faulty one to the shop with you to show the shop assistant – it saves a lot of confusing embarrassment!

The two most important points when buying components for cable-making are that you get the right wire and the right connectors. Again, ask if you're not sure. While a piece of lighting cable or bell-wire might look as if you can use it to make a video or audio connection, the results you'll obtain will never be as good as with the correct type of wiring and the best connectors you can afford.

In my experience, most cable faults can be traced to broken or shorted wiring, for instance where a cable has come adrift from its connector, or when a 'dry' solder joint has lost its electrical conductivity through age, overheating or fracturing. Physical damage can often be located visually by removing the cover from the connector and checking for loose, frayed, or disconnected wiring or short circuits.

Sometimes the remedy may be as simple as using a sliver of insulating tape to separate the shorted wires, or it may require a complete rebuild of the connector, necessitating its removal or replacement, stripping the cable back to new wiring core, and making new solder connections all round.

However, not all visual inspections bear fruit, and it may be necessary to test the continuity of each wire in the cable with a multimeter set to measure resistance. If a cable has been subjected to rough treatment or is getting on in years, it might have become fractured in the wire core, rather than at the connectors, usually meaning that the whole cable will have to be replaced.

Soldering is fairly easy, and with a little practice you should become confident about making your own cables. The main points to note are that the soldering iron should be at full temperature (the solder will melt and flow easily with the right heat) and that a joint will be stronger where the bare wire can be wrapped around its connection tab before soldering. The connector and wire should be clean and free from grease (use sandpaper or a file if necessary), and should be kept immobile until the solder sets.

The easiest and most frustrating mistake to make is to forget to pass the cable through the connector's cover before soldering it up, something I still do occasionally. All the fiddly work of stripping, trimming and connecting has to be done all over again – just when you thought you'd finished!

So if you've been having doubts about your cable-making ability, don't. Give it a go, learn the ropes and pretty soon you'll wonder why you've been paying full whack for cables which are so easy to make you could do it yourself for far less.



A selection of the most useful tools required for making cheaper cables

Basic tool kit

Soldering iron (electric)	Assorted screwdrivers
Solder sucker	Electrical multimeter
Solder	Wire stripper
Insulating tape	Cutters
Long-nosed pliers	Sharp knife
Square-nosed pliers	Cables
	Connectors

Safety first!

Never work on equipment which is connected to the mains. Switch off and disconnect first. If you're rewiring a mains plug make sure you know the colour codes and follow them. Use the correct fuses. Be safe – don't take chances. If in doubt, get a professional to do the job.

Contact

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk.

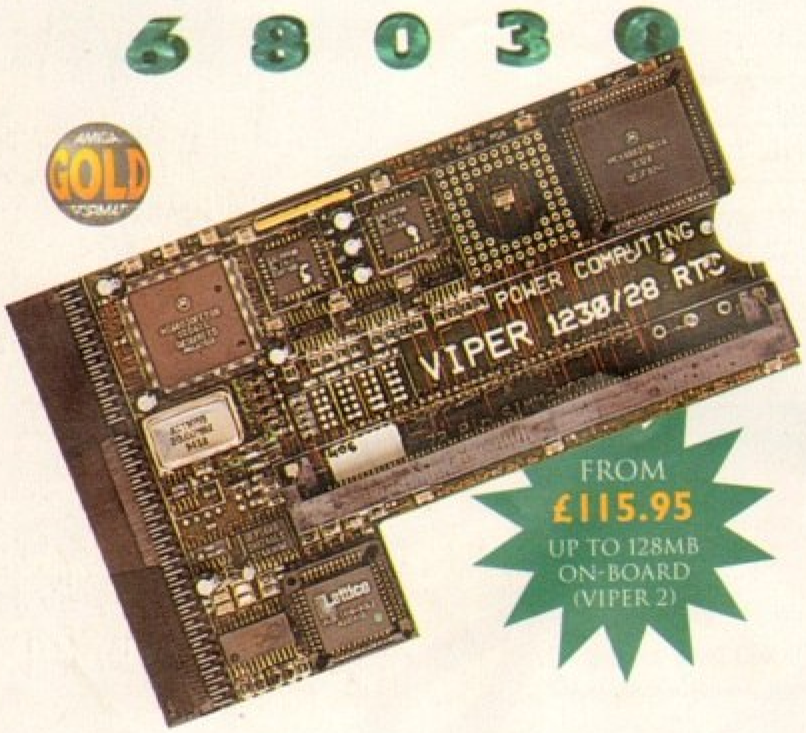
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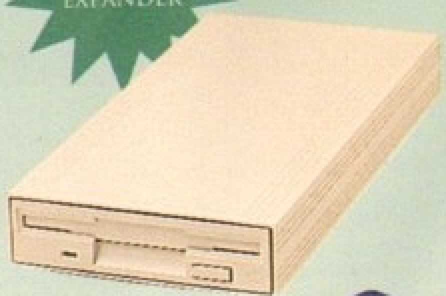
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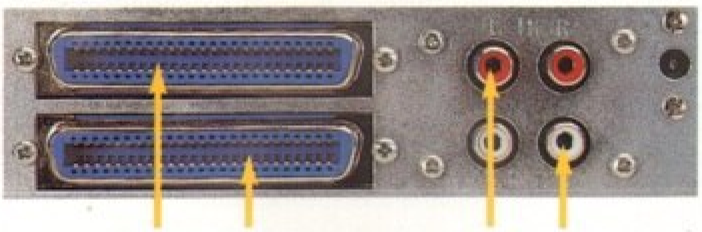


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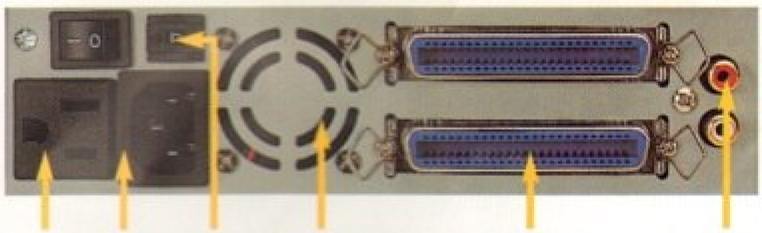


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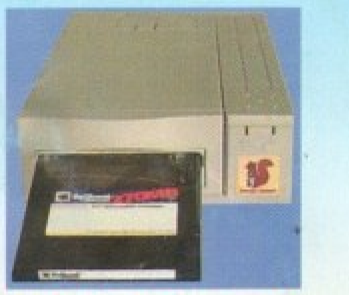
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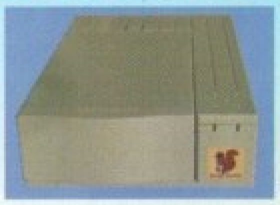
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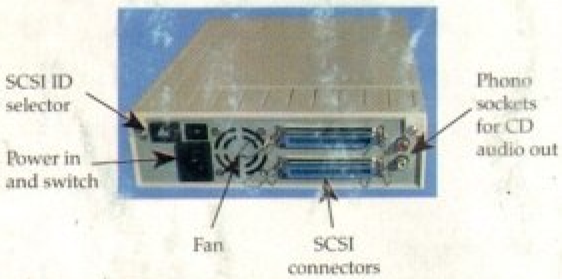
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Hard drives are becoming more and more affordable and we can now offer some tremendous prices on a range of superb quality, Quantum drives in a range of capacities.

These drives offer fast seek times (14ms @ 270Mb, 11ms @ 540/730Mb, 9ms @ 1Gb), large caches and high speed data transfer rates (1.5Mb/sec with Squirrel). All units can be supplied for you to fit in your own case or pre-installed in one of our professional Squirrel Storage Cases. The Squirrel does not auto-boot external hard disks but you can do this from floppy or from internal IDE hard disk.

We can supply all leads, terminators etc. Please feel free to discuss your exact requirements with our friendly, technical staff.

Squirrel Storage Systems



All our Squirrel Storage Systems come either bare (*int* - ready for installation internally within a suitably-equipped Amiga or other computer) or fully-cased (*ext*) with integral power supply, SCSI in/out, SCSI ID selector and audio out (for CD-ROM). The cases we supply are high quality, shielded, snap-together enclosures, each with 40W power supply - the back panelof the 5.25" case is shown above. These SCSI enclosures are available at **£69.95** each (please specify 3.5" or 5.25" when ordering).

The neat Squirrel SCSI interface is shown on the right. The unit simply plugs into the PCMCIA slot, comes complete with all the software you need together with a cable which terminates in a 50-way Amphenol plug to attach to your first SCSI device.



the Squirrel SCSI interface

Twist 2

Twist 2 is the new, friendly, relational database for all Amigas. Twist's range of power features such as its integrated forms designer, its varied & multi-level querying, its N:1 1:N & N:M relations coupled with its un-cluttered, well-designed user interface make it ideal for both the first-time and the seasoned database user.



Twist 2 is the only database you will ever need - a product that expands to meet your requirements as they grow. So, before you buy another database, why not take a look at the Twist demo disk?

AURA

The latest of our highly acclaimed sound samplers for the A600/A1200, Aura offers high performance 12/16 bit quality with direct-to-disk sampling plus a host of software features. Octamed 5.04 up compatible.

96% Amiga Shopper 90% AUI

GAMESMITH

Professional game development is made easy with the new GameSmith Development System. Over 3 years in the making, GDS gives you the low level power to create the masterpiece of your dreams in a single, easy-to-use, comprehensive environment, using C or assembler. Comes complete with junior versions of Dice C and Devpac 3. **90% AUI 92% CU Amiga**

Termite



Afraid of becoming a hedgehog on the Information Super Highway? Don't worry, Termite is so easy to use that even a first time user will feel at home. Yet it has all the power and flexibility to satisfy the most seasoned modem warrior!

Termite is packed with features and comes with its superb Button Bar already set up for instant access to CIX and many BBSs. **88% Amiga Computing 95% AUI 88% CU Amiga**

Ordering Information

All HiSoft products (see the complete list below) should be available through your favourite Amiga dealer. If you have difficulty in obtaining any title you can order directly from HiSoft - just call us free on **0500 223660**, armed with your credit or debit card; we will normally despatch within 4 working days or, for an extra £6, by guaranteed next day delivery (for goods in stock). Alternatively, you can send us a cheque or postal orders. All prices include VAT. Export orders: call or fax to confirm pricing and postage costs. © 1995 HiSoft. E&OE.

HiSoft products for your Amiga: Squirrel SCSI interface - £69.95, Squirrel Storage Systems - as above, Aura 12/16 bit sampler - £99.95, Megalosound 8 bit sampler - £34.95, ProMidi interface - £24.95, HiSoft Devpac 3.14 - £79.95, HiSoft BASIC 2 - £79.95, HighSpeed Pascal - £99.95, Gamesmith - £99.95, Termite - £39.95, Twist 2 database - £99.95, Maxon Magic - £29.95, Upper Disk Tools - £14.95, VistaLite inc MakePath/TerraForm - £39.95 and much more. **Coming soon: DiskMagic** (disk tools) **and Cinema4D.**



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